1534

SERVICE MANUAL

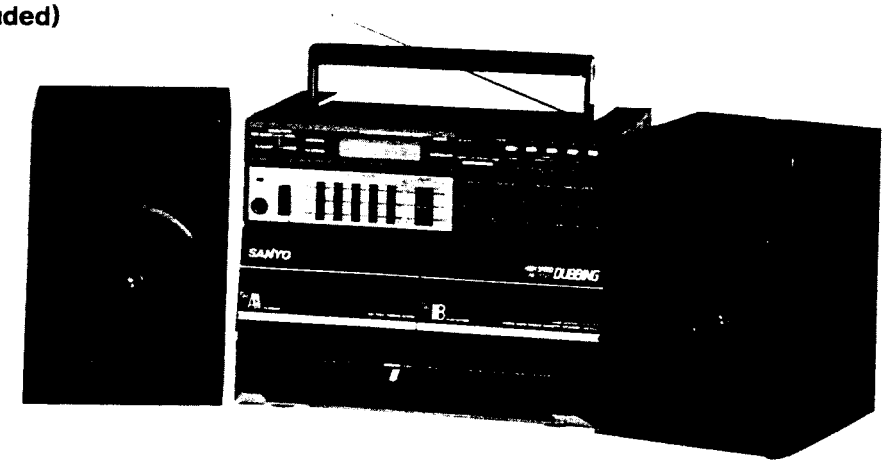
SANYO

MW255L (EUROPE)

STEREO RADIO DOUBLE CASSETTE RECORDER

NOTE
There are two types of MW255L.
One type of MW255L includes the EXT ANT jack and DX/LOCAL switch on the back side of the unit, and another type of MW255L excludes the EXT ANT jack and DX/LOCAL switch on the back side of the unit.

PRODUCT CODE No.
142 476 00 (EXT ANT jack supplied)
142 462 02 (EXT ANT jack excluded)



SPECIFICATIONS

Power Source
- AC 115/230V, 50/60Hz
- DC 12V
- (UM-1, HP 2, D Cell, Monozelle, R 20) x 6

Output Power (Max. music power) ..... 4.5W x 2
Power Consumption 24W
Current Consumption (at Vol. Min.)
- Record mode 250mA
- Playback mode 190mA
- Fast Forward mode 190mA
- Rewind mode 210mA

Recording System ..... AC Bias
Erasing System ..... AC Erasing
Tape Speed ..... 1-7/8ips. ±3%
Wow & Flutter ..... 0.15% (WRMS)
Torque
- Playback ..... 30 ~ 60g-cm
- Fast Forward/Rewind ..... more than 60g-cm

Fast Forward/Rewind Time ..... 175sec. (with C-60)
Frequency Response
- Fe_2O_3 ..... 100Hz~12,500Hz

Erase Ratio (Overall, with Fe_2O_3) 60dB
Signal to Noise Ratio (with Fe_2O_3) 40dB
Crosstalk (with Fe_2O_3)
- Track to Track 50dB

Channel Separation (with Fe_2O_3) 40dB
Harmonic Distortion (K3/with Fe_2O_3) 4%
Hum & Noise (at Vol. Min.) ..... −60dBs
Input Sensitivity and Impedance
- MIC. 1.4mV/4.7kΩ
- LINE IN 400mV/50kΩ

Output Level and Impedance
- LINE OUT ..... 500mV/47kΩ load
- EXT Speaker 3.2Ω
- Headphones 32Ω

Frequency Range
- LW ..... 153 ~ 281kHz
- MW ..... 531 ~ 1,602kHz
- SW ..... 5.9 ~ 15.5MHz
- FM ..... 87.5 ~ 108.0MHz

– Specifications subject to change without notice. –

CABINET PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	141-6-1419-97500	Individual Carton (EXT ANT jack supplied)	1
	141-6-1419-97501	Individual Carton (EXT ANT jack excluded)	1
	141-6-1469-28700	Case Top	1
	141-6-1469-28800	Case Bottom	1
	141-6-2519-19590	Poly Cover	2
	141-6-2519-19690	Poly Cover	1
	141-6-4559-03305	Serial No. Sheet (EXT ANT jack supplied)	2
	ACCESSORIES		
	⚠ 4-2432-00290	Power Cord	1
	141-6-2519-11022	Poly Cover 110 X 220	1
	141-6-2519-25035	Poly Cover 250 X 350	1
	141-6-4729-07400	Label Caution (Inst-Book)	1
	141-6-4729-16700	Label Caution (Handle)	1
	141-6-4729-37847	Notice FTZ (EXT ANT jack excluded)	1
	141-6-4729-37866	Label Caution Batt (Cabinet Bottom)	1
	142-6-4119-33599	Instruction Book	1
	CABINET		
	141-2-4729-07100	Wire Band	4
CN306	4-2352-03320	Connector 2P Assy	1
R45	401 012 7009	CARBON 10K JA 1/4W (EXT ANT)	1
R47	401 028 2609	CARBON 100 JA 1/8W (EXT ANT)	1
1	141-2-1629-11800	Knob Lever	2
2	141-2-1649-52300	Knob Slide	2
3	141-2-1659-67900	Knob Power	1
4	141-2-1659-68000	Knob Push	3
5	141-2-4219-22600	Screw Poly Wave	2
6	141-2-4219-14801	Screw	5
7	141-0-1129-32400	Cabinet Top Assy	1
8	141-0-1249-48400	Lid Cassette Left Assy	1
9	141-0-1249-48500	Lid Cassette Right Assy	1
10	141-0-5519-08501	Gear Eject Assy	2
11	141-2-1519-57800	Reflection LCD	1
12	141-2-1659-96200	Knob Push Function	6
13	141-2-1659-96300	Knob Push Preset	5
14	141-2-1659-96400	Knob Push Reset	1
15	141-2-3779-20400	Holder PCB	2
16	141-2-3779-25600	Holder LCD	1
17	141-2-3779-25700	Holder LED	1
18	141-2-3889-06600	Cover LCD	1
19	141-2-6219-05701	Arm Touch Switch B	1
20	141-2-6219-05800	Arm Switch	1
21	141-2-8549-33500	Spring Lid Cassette (A)	1
22	141-2-8549-33600	Spring Lid Cassette (B)	1
23	141-2-6129-07100	Spindle Button	1
24	141-2-2629-08100	Bracket Button A	2
25	141-2-1659-96500	Button Stop/Eject L	1
26	141-2-1659-96600	Button Play L	1
27	141-2-1659-96700	Button Rewind	2
28	141-2-1659-96800	Button FF	2
29	141-2-1659-96900	Button High Speed	1
30	141-2-1659-97000	Button Dubbing	1
31	141-2-2629-12100	Bracket Button B	1
32	141-2-1659-97100	Button Record	1
33	141-2-1659-97200	Button Play R	1
34	141-2-1659-97300	Button Pause	1
35	141-2-1659-97400	Button Stop/Eject R	1
36	4-1539-70660	Microphone [BM301]	1
37	4-2319-70774	Slide Switch (DX/LOCAL) [SW3]	1
38	4-2352-00110	Socket 1P (EXT ANT)	1
39	4-2449-70370	Rod Antenna	1
40	⚠ 4-2512-21822	Power Trans [T901]	1
41	141-2-1129-58103	Cabinet Bottom (EXT ANT jack Supplied)	1
41	141-2-1129-58106	Cabinet Bottom (EXT ANT jack excluded)	1
42	141-2-3829-09400	Terminal Battery Anode	1
43	141-2-3829-20800	Spring Battery	1
44	141-2-3829-22400	Spring Battery	2
45	141-0-1719-11003	Handle Assy	1
46	141-2-1339-41100	Lid Battery	1
47	141-2-3829-19500	Spring Battery	1
48	141-2-3829-32600	Terminal Anode	1
49	141-2-4219-14200	Screw	1
50	141-2-4469-47200	Cushion Handle	2
51	141-2-8549-41000	Spring Terminal	1
61	141-0-1939-22851	Amplifier P.C.B. Assy	1
62	141-0-1939-25070	Radio Tuner P.C.B. Assy (The Model of EXT ANT jack supplied.)	1
62	141-0-1939-25072	Radio Tuner P.C.B. Assy (The Model of EXT ANT jack excluded.)	1
63	141-0-1939-25080	Control Tuner P.C.B. Assy	1
64	141-0-1939-25082	LED P.C.B. Assy	1
65	141-0-1939-22402	Graphic Equalizer P.C.B. Assy	1
66	141-0-1939-24861	Power P.C.B. Assy	1
71	411 023 3303	SCR S-TPG PAN 2.6X8	14
72	411 023 4003	SCR S-TPG PAN 3X10	7
73	411 002 9104	SCR PAN 3X8	3
74	411 023 6304	SCR S-TPG PAN 3X20	4
75	411 001 1703	SCR S-TPG PAN 3X30	2
76	411 021 1806	SCR S-TPG BIN 2.6X10	8
77	411 021 2704	SCR S-TPG BIN 2.6X6	2
78	411 021 1905	SCR S-TPG BIN 2.6X10	1
79	411 040 1702	SCR PAN 2.6X4	2
80	411 004 4404	NUT HEX 3	2
81	411 040 4802	SCR PAN 2.6X8	1
82	411 023 4201	SCR S-TPG PAN 3X10	2
83	411 000 9908	RING E 3	5
84	411 002 7803	SCR PAN 3X4	1

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

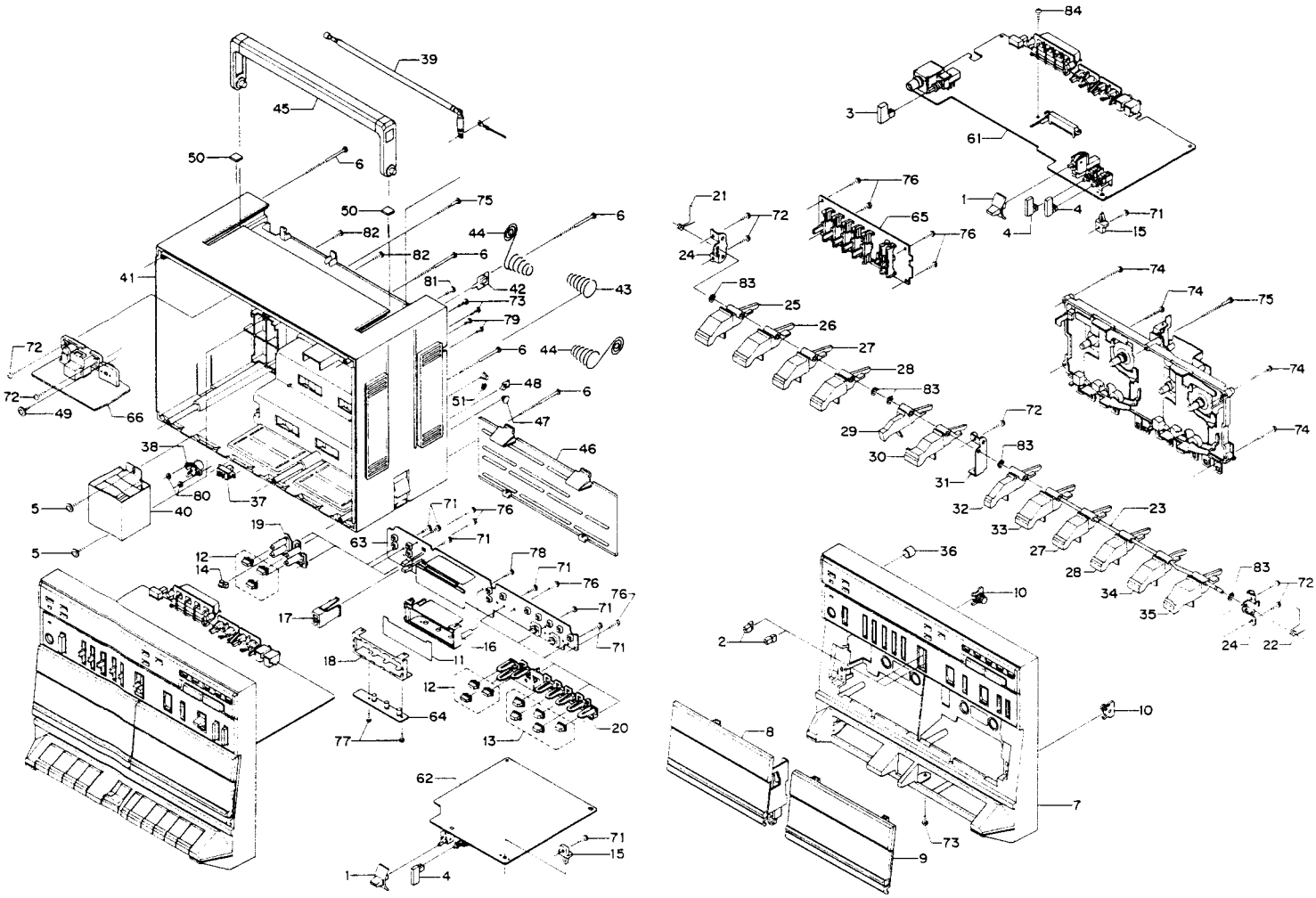
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTE

There are two types of MW255L.
One type of MW255L includes the EXT ANT jack and DX/LOCAL switch on the back side of the unit, and another type of MW255L excludes the EXT ANT jack and DX/LOCAL switch on the back side of the unit.

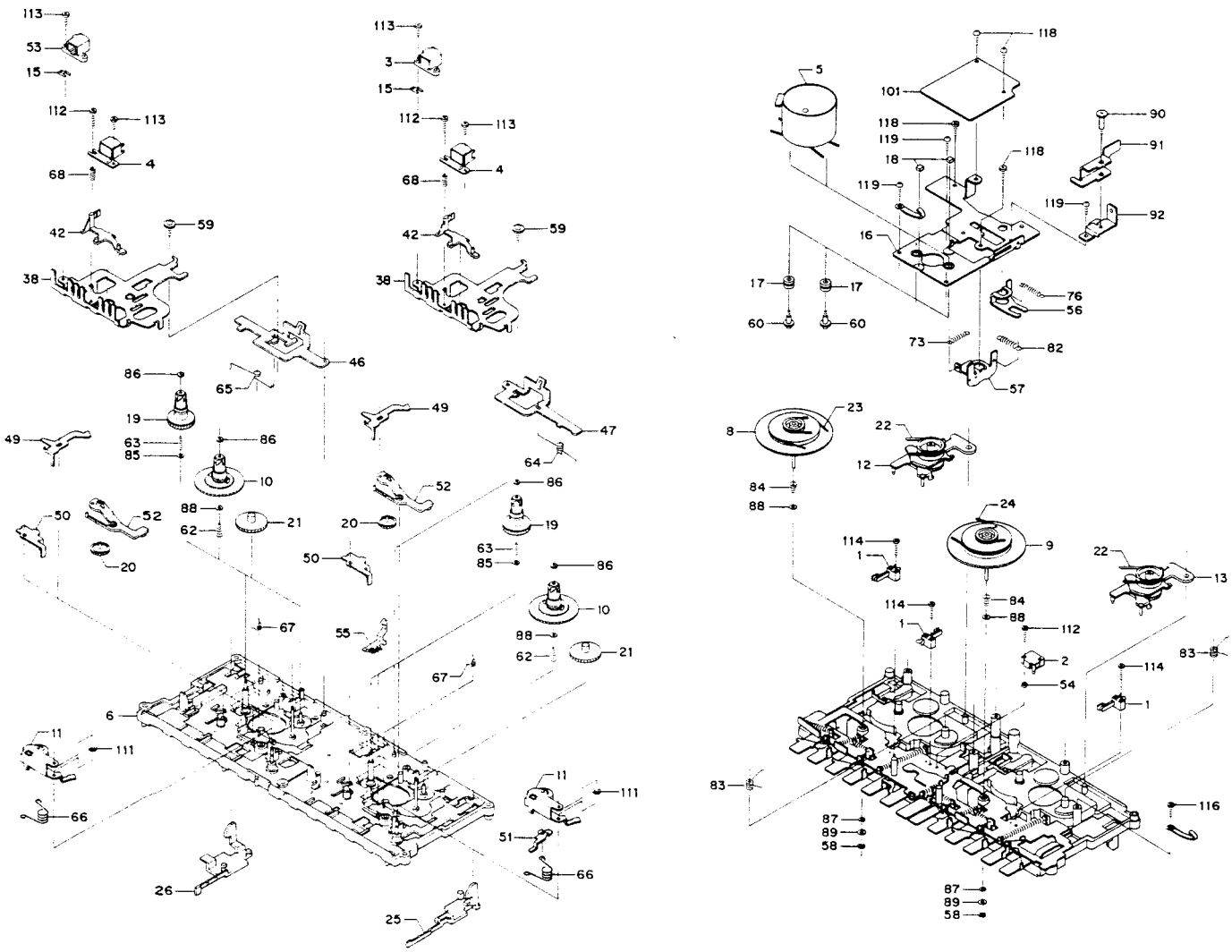
CABINET EXPLODED VIEW



MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	MECHANISM		
	141-2-4729-03700	Lug (Bracket Motor)	1
	141-2-4729-04100	Lug (Chassis)	1
	141-2-4729-07100	Wire Band	9
CN301	4-2352-02634	Connector 6P Assy	1
CN302	4-2352-02780	Connector 3P Assy	1
CN303	4-2352-02697	Connector 2P Assy	1
C804	403 042 3600	ELECT 100U M 16V	1
1	4-2319-74360	Leaf Switch (Motor 1) [S306]	1
1	4-2319-74360	Leaf Switch (Motor 2) [S307]	1
1	4-2319-74360	Leaf Switch (Play) [S308]	1
2	4-2319-78590	Lever Switch (Dubbing) [S309]	1
3	4-2429-72200	Erase Head [HD3]	1
4	4-2429-73170	R/P Head [HD1]	1
4	4-2429-73170	R/P Head [HD2]	1
5	4-5279-71641	Motor [M801]	1
6	141-0-3119-26302	Chassis Assy	1
7	141-0-3519-25900	Bracket Rod Assy	1
8	141-0-5219-13201	Flywheel Compl	1
9	141-0-5219-13700	Flywheel Compl	1
10	141-0-5319-09800	Fix Take-up Assy	2
11	141-0-5419-03201	Pinchroller Assy	2
12	141-0-5519-13600	Idler Assy R/P	1
13	141-0-5519-13601	Idler Assy P	1
14	141-2-3519-79800	Bracket Rod Speed Switch	1
15	141-2-3529-18100	Spacer Head	2
16	141-2-3789-11000	Bracket Motor	1
17	141-2-4459-11800	Cushion Motor	2
18	141-2-4469-21300	Cushion	2
19	141-2-5319-17400	Fix Supply Reel	2
20	141-2-5519-65200	Gear Take-up	2
21	141-2-5519-65400	Gear F FWD	2
22	141-2-5649-28100	Belt Wind	2
23	141-2-5649-28200	Belt Drive R/P	1
24	141-2-5649-28300	Belt Drive P	1
25	141-2-7319-71100	Plate Lock Lid L	1
26	141-2-7319-71200	Plate Lock Lid R	1
27	141-2-7319-71400	Rod Stop Eject R	1
28	141-2-7319-71600	Rod F FWD	2
29	141-2-7319-71700	Rod Rewind	2
30	141-2-7319-71800	Rod Play	1
31	141-2-7319-71900	Rod Record	1
32	141-2-7319-72000	Rod Dubbing	1
33	141-2-7319-72100	Rod Speed Switch	1
34	141-2-7319-72200	Rod Stop Eject L	1
35	141-2-7319-72400	Plate SW Motor L	1
36	141-2-7319-72500	Plate SW Motor R	1

MECHANISM EXPLODED VIEW

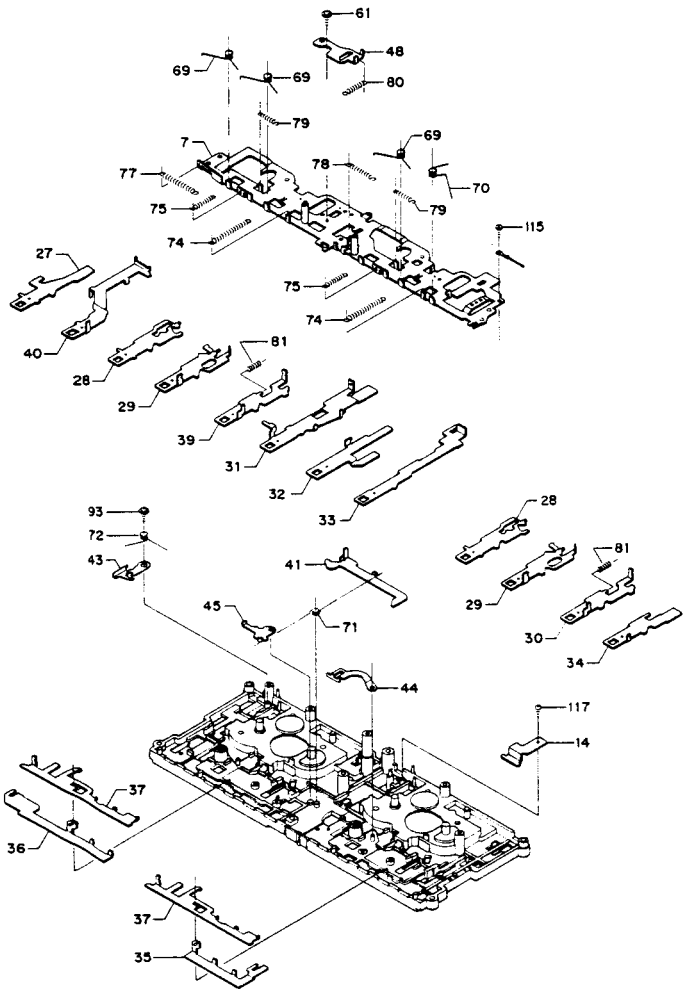


MECHANISM PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
37	141-2-7319-72600	Plate Lock	2
38	141-2-7319-72800	Base Slide	2
39	141-2-7319-77200	Rod Play	1
40	141-2-7319-71500	Rod Pause	1
41	141-2-7319-77400	Plate AMP Switch	1
42	141-2-7419-98500	Lever Sensor ASO	2
43	141-2-7419-99400	Lutch Pause	1
44	141-2-7419-99500	Lever Play	1
45	141-2-7419-99600	Lever Stopper Rec	1
46	141-2-7419-99700	Lever Cassette Fix L	1
47	141-2-7419-99800	Lever Cassette Fix R	1
48	141-2-7419-99900	Lever Dubbing	1
49	141-2-7429-00200	Lever ASO	2
50	141-2-7429-00300	Lever Cue Review	2
51	141-2-7429-06600	Lever Arm Pinch	1
52	141-2-7439-49200	Arm Take-up	2
53	141-2-8219-36700	Guide Tape	1
54	141-2-8259-00300	Spacer Brake	1
55	141-2-8419-11700	Interlock Lever	1
56	141-2-8429-07700	Lever Speed Switch	1
57	141-2-8429-08100	Lever R/P Switch	1
58	141-2-4579-04400	E Ring	2
59	141-2-4219-05400	Screw Washer	2
60	141-2-4219-30100	Screw	2

Ref. No.	Part No.	Description	Q'ty
61	141-2-4219-42100	Screw	1
62	141-2-8559-15200	Spring Reel	2
63	141-2-8559-15400	Spring Supply	2
64	141-2-8529-30600	Spring Cassette Lock R	1
65	141-2-8529-30700	Spring Cassette Lock L	1
66	141-2-8529-30300	Spring Pinch Roller	2
67	141-2-8529-32400	Spring Take-up	2
68	141-2-8559-14900	Spring Head	2
69	141-2-8529-30200	Spring Rod	3
70	141-2-8529-30900	Spring Rod Stop	1
71	141-2-8529-31000	Spring Stop Rec	1
72	141-2-8529-30400	Spring Pause Lutch	1
73	141-2-8519-70200	Spring Base Slide	1
74	141-2-8549-33700	Spring Rod Base	2
75	141-2-8549-34800	Spring Lever ASO	2
76	141-2-8519-14300	Spring Lever Cassette Lid	1
77	141-2-8519-38700	Spring Lever Head	1
78	141-2-8519-03600	Spring Shut Off Lever	1
79	141-2-8549-37400	Spring Plate Motor	2
80	141-2-8549-04500	Spring Eject	1
81	141-2-8559-14300	Spring Base Slide	2
82	141-2-8519-01800	Spring Rewind Roller	1
83	141-2-8529-36700	Spring Arm Idler	2
84	141-2-8559-04700	Spring Pulley	2

MECHANISM EXPLODED VIEW (Continued)



MECHANISM PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
85	141-2-4539-27601	Washer	2
86	141-2-4539-15700	Washer	4
87	141-2-4539-27603	Washer	2
88	141-2-4539-35500	Washer	4
89	141-2-4539-19800	Washer	2
90	141-2-4219-29600	Screw	1
91	141-2-8419-17800	Lever Record	1
92	141-2-8459-05200	Bracket R/P Switch	1
93	141-2-4219-13201	Screw Washer	1
101	141-0-1939-24020	Control P.C.B. Assy	1
111	411 015 9009	RING E 2	2
112	411 030 7509	SCR BIN 2X7	3
113	411 030 6403	SCR BIN 2X5	4
114	411 021 0205	SCR S-TPG BIN 2X12	3
115	411 021 0809	SCR S-TPG BIN 2X6	1
116	411 021 3107	SCR S-TPG BIN 2.6X8	1
117	411 022 8101	SCR S-TPG PAN 2X7	1
118	411 023 3303	SCR S-TPG PAN 2.6X8	4
119	411 002 6004	SCR PAN 2.6X6	3

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

ELECTRICAL ADJUSTMENTS

EQUIPMENT REQUIRED

- VTVM (2 sets)
- Frequency Counter
- Dualtrace Oscilloscope
- DC Constant-voltage Regulator
- Dummy Load (47kΩ)
- Coil (1~10mH)
- Test Tapes
  - ‡ 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
  - ‡ 10kHz Test Tape (Example: TEAC MTT-114) for Head Azimuth Adjustment
- Test Tape for Oscillation Frequency Adjustment
  - ‡ CrO_2 Tape (Example: TDK AC 512)
- Alignment Tool

Unless especially specified, set the unit and measuring instruments as follows:

- Power Switch ..... ON
- Function Switch ..... TAPE
- OSC Switch 1
- Graphic Equalizer Controls ..... 0 (click position)
- Volume Controls ..... Arbitrary

NOTE:

- ‡ Supply 12V DC from the constant-Voltage regulator to the EXT. Power Jack.
- ‡ The Electrical Adjustment should be performed in the order as described below.

TAPE SPEED ADJUSTMENT

1. First detach the Cabinet Bottom from the unit and connect the dummy load (47kΩ) and the frequency counter to the left or right channel LINE OUT terminal.
2. Then insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette compertment of the TAPE B side. and set it in the playback mode.
3. Adjust the potentiometer (P801) in the CONTROL P.C.B. until the frequency counter reads 3,000Hz ±30Hz.

HEAD AZIMUTH ADJUSTMENT

Connect the dualtrace oscilloscope and the VTVM to both channel LINE OUT.

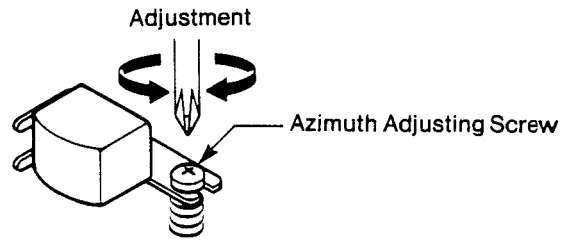
Then, set the dualtrace oscilloscope as follows:

- ‡ MODE ..... CHOP (chopped)
- ‡ SOURCE ..... INT (internal), CH1 or CH2
- ‡ SWEEP MODE ..... AUTO (automatic)

NOTE:

Adjust the field on the oscilloscope with the VOLT. ADJ. and TIME ADJ.

1. Insert a 10kHz test tape (Example: TEAC MTT-114) into the cassette compartment.
2. While playing back the test tape, turn the azimuth adjusting screw until the wave forms of the right and left channels are superimposed and set to optimum at maximum reading on the VTVM.



3. After the adjustment, secure the adjusting screw with paint or glue.

OSCILLATION FREQUENCY ADJUSTMENT

1. Set the Tape Select Switch to "CrO_2" position and insert a CrO_2 tape (Example: TDK AC 512) into the cassette compertment of the TAPE B side.
2. Set the OSC switch to the "1" position.
3. Connect the coil (1~10mH) to the frequency counter and allow it to come near the OSC trans (T301) of AMPLIFIER P.C.Board.
4. Set the TAPE 2 side in the recording mode and turn and adjust the core of the OSC trans, so that the figure of the frequency counter shold become 85kHz ±50Hz.

TUNER ADJUSTMENTS

EQUIPMENT REQUIRED

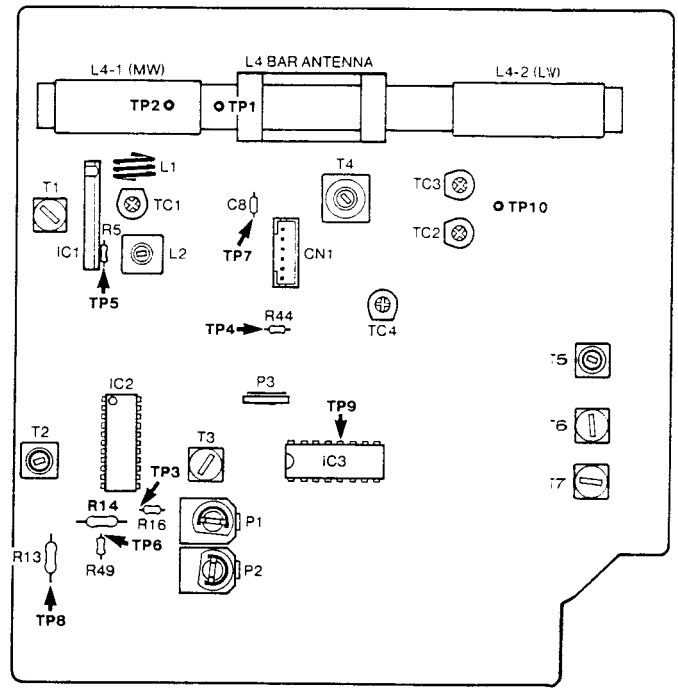
- AM Standard Signal Generator
- FM Standard Signal Generator
- Generator Scope
- Loop Antenna for MW,LW
- Dummy Antenna (30Ω/10pF) for SW
- Dummy Antenna (75Ω, unbalanced type) for FM
- Ceramic Capacitor (10pF)
- Electrolitic Capacitor (1μF)
- Carbon Resistor (100kΩ, 330kΩ)
- VTVM
- DC Voltmeter (High Impedance)
- Frequency Counter
- Oscilloscope
- Dummy Load (3.2Ω)
- Alignment Tool
- Before performing the adjustment, set the switches and controls as follows:
  - ‡ Function Switch ..... RADIO
  - ‡ Graphic Equalizer Controls ..... 0 (click position)
  - ‡ Volume Controls ..... Arbitrary

NOTE:
Use an alignment tool with plastic grip for all adjustments.

TUNER CONTROL IC REFERENCE OSCILLATION FREQUENCY ADJUSTMENT

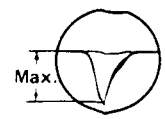
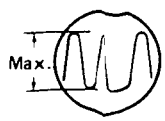
1. Connect a frequency counter to Pin 28 (XO) of IC401 in the Control Tuner P.C.B. through a resistor 330kΩ.
2. Adjust the **TC401** in the Control Tuner P.C.B. until the oscillation frequency of IC401 becomes 75kHz±0.3Hz.

TUNER P.C.BOARD ALIGNMENT POINTS (TOP VIEW)



MW ALIGNMENT

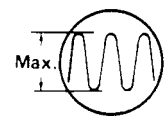
Standard Test Frequency 400Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Frequency Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of IF	Connect the coil (5~6 turn) to the output of genescope and allow it to come near the bar antenna.	Connect input terminal of genescope to Pin 12 of IC2 (**TP3**) through capacitor (1μF).	460kHz	531kHz	**T3**	Obtain symmetrical curve and maximum amplitude. 
2	Calibration of Tuning Range	–	Connect DC voltmeter to **TP4**.	–	1,602kHz	**T6**	Reading on the DC voltmeter is **3.0V**.
3	Adjustment of Tracking	Connect loop antenna to output of AM signal generator. Place loop antenna 60cm away from bar antenna.	Connect VTVM with 3.2Ω dummy load and oscilloscope to Speakers terminal.	612kHz	612kHz	**L4-1** (bar ant.)	Obtain sine-wave of 400Hz and maximum amplitude. 
4				1,404kHz	1,404kHz	**TC2**	

TUNER ADJUSTMENTS (Continued)

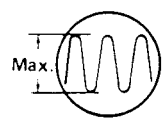
LW ALIGNMENT

Standard Test Frequency 400Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Frequency Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of Tuning Range	–	Connect DC voltmeter to **TP4**.	–	281kHz	**T7**	Reading on the DC voltmeter is **6.2V**.
2	Adjustment of Tracking	Connect loop antenna to output of AM signal generator. Place loop antenna 60cm away from bar antenna.	Connect VTVM with 3.2Ω dummy load and oscilloscope to Speakers terminal.	171kHz	171kHz	**L4-2** (bar ant.)	Obtain sine-wave of 400Hz and maximum amplitude. 
3				262kHz	262kHz	**TC3**	

SW ALIGNMENT

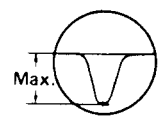
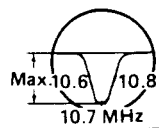
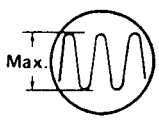
Standard Test Frequency 400Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Frequency Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of Tuning Range	–	Connect DC voltmeter to **TP4**.	–	15.5MHz	**T5**	Reading on the DC voltmeter is **7.8V**.
2	Adjustment of Tracking	Connect AM signal generator to antenna terminals (**TP10** and **TP2**)* through dummy antenna (30Ω/10pF).	Connect VTVM with 3.2Ω dummy load and oscilloscope to Speakers terminal.	6.5MHz	6.5MHz	**T4**	Obtain sine-wave of 400Hz and maximum amplitude. 
3				14.0MHz	14.0MHz	**TC4**	

* As for the model excluded EXT ANT jack, connect to TP1 and TP2.

FM ALIGNMENT

Standard Test Frequency 400Hz and Deviation 22.5kHz

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Frequency Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of IF	Connect output terminal of gene-scope to Pin 8 of IC1 (**TP5**) through capacitor (10pF).	Connect input terminal of gene-scope to Pin 10 of IC2 (**TP6**) through capacitor(1μF).	10.7MHz	87.5MHz	Turn **T2** (blue core) fully counter-clockwise and then, adjust **T1**.	Obtain symmetrical curve and maximum amplitude. 
2						**T2** (blue core)	Obtain **S** curve and maximum amplitude. 
3	Calibration of Tuning Range	–	Connect DC voltmeter to **TP7**.	–	108.0MHz	**L2**	Reading on the DC voltmeter is **6.5V**.
4	Adjustment of Tracking	Connect FM signal generator to antenna terminals (**TP1** and **TP2**) through dummy antenna (75Ω, unbalanced type).	Connect VTVM with 3.2Ω dummy load and oscilloscope to Speakers terminal.	90.0MHz	90.0MHz	**L1**	Obtain sine-curve and maximum amplitude. 
5				106.0MHz	106.0MHz	**TC1**	

TUNER ADJUSTMENTS (Continued)

FM/MW STATION DETECT SENSITIVITY ALIGNMENT

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Frequency Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	FM	Connect FM signal generator to antenna terminals (**TP1** and **TP2**) through dummy antenna (75Ω, unbalanced type).	Connect a DC voltmeter into both sides of the resistor **R14**.	90.0MHz (ANT. input 60dBμ)	90.0MHz	**T2**	Reading on the DC voltmeter is less than **±5mV**.
2			Connect DC voltmeter to **TP8**.	90.0MHz (ANT. input 20dBμ)	90.0MHz	**P2**	Reading on the DC voltmeter should meet at the point of "LOW" level changed from the "HIGH" level.
3	MW	Connect loop antenna to output of AM signal generator. Place loop antenna 60 cm away from bar antenna.	Connect DC voltmeter to **TP8**.	603kHz (ANT. input 52dBμ)	603kHz	**P1**	Reading on the DC voltmeter should meet at the point of "LOW" level changed from the "HIGH" level.

NOTE: In the first instance, perform the adjustment for **FM**.

FM MPX (Multiplex) ADJUSTMENT

19kHz (V.C.O.) ADJUSTMENT

1. Before the adjustment, set the switches as follows:
   - Function Switch ..... RADIO
   - FM Mode Switch ..... STEREO
   - Band Select Switch ..... FM
2. Connect a frequency counter to Pin 12 of IC3 (**TP9**) through a resistor 100kΩ.
3. Adjust the potentiometer (**P3**) until the oscillation frequency of IC3 becomes 19kHz (±20Hz).

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	AMPLIFIER P.C.B. ASSY		
61	141-0-1939-22851	Amplifier P.C.B. Assy	1
	141-2-3689-14600	Radiator IC (for IC303)	1
	411 023 9800	SCR S-TPG PAN 3X8 (for IC303)	2
	131-2-9800-02300	Jumper (Graphic EQ, 4P)	1
	131-2-9800-02301	Jumper (Graphic EQ, 3P)	1
	4-2369-73783	Pin 1P	2
CN301	4-2369-73390	Connector 6P	1
CN302	4-2369-73360	Connector 3P	1
CN303	4-2369-73790	Connector 2P	1
CN304	4-2369-74750	Plug 8P	1
CN305	4-2369-75100	Plug 4P	1
CN306	4-2369-73790	Connector 2P	1
CN307	4-2369-73790	Connector 2P	1
CN308	4-2369-74390	Plug 6P	1
F301	4-2349-70620	Protector, ICP-N5	1
J101	4-2352-01160	Jack 3P (Mic)	1
J201	4-2352-01160	Jack 3P (Mic)	1
J301	4-2352-02550	Pin Jack 2P (LINE IN)	1
J302	4-2352-02550	Pin Jack 2P (LINE OUT)	1
J303	4-2352-01170	Jack 7P (Headphones)	1
J304	4-2379-71270	4P Push Terminal	1
S301	4-2312-06380	Slide Switch (Record/Play)	1
S302	4-2319-78080	Lever Switch (Function)	1
S303	4-2319-79460	Push Switch (Power)	1
S304	4-2319-75590	Slide Switch (OSC)	1
S310	4-2319-78940	Push Switch (Tape Select 2)	1
S311	4-2319-78940	Push Switch (Tape Select 1)	1
L101	4-2552-00140	AF Coil (4.7mH)	1
L102	4-2729-70480	Coil (33mH)	1
L201	4-2552-00140	AF Coil (4.7mH)	1
L202	4-2729-70480	Coil (33mH)	1
L301	4-2659-70240	Loading Coil	1
L304	4-2659-70432	Choke Coil Ring	1
T301	4-2589-73091	OSC Trans	1
D101	407 061 2309	DIODE 1SS95	1
D201	407 061 2309	DIODE 1SS95	1
D301	407 061 2309	DIODE 1SS95	1
D303	407 061 2309	DIODE 1SS95	1
D304	407 061 2309	DIODE 1SS95	1
D308	407 061 2309	DIODE 1SS95	1
D309	407 063 9603	ZENER DIODE MTZJ9.1A	1
D310	407 061 2309	DIODE 1SS95	1
D311	407 061 2309	DIODE 1SS95	1
D312	407 061 2309	DIODE 1SS95	1
IC301	409 002 4700	IC BA3416BL	1
IC302	409 002 4007	IC BA3306	1
IC303	409 017 9509	IC LA4505	1
Q101	405 021 0501	TR 2SD1012-G	1
Q102	405 011 0009	TR 2SC1571-G-L-NP	1
Q103	405 019 3804	TR 2SC536-G-NP	1
Q104	405 019 3804	TR 2SC536-G-NP	1
Q105	405 010 9904	TR 2SC1571-F-L-NP	1
Q106	405 011 0009	TR 2SC1571-G-L-NP	1
Q107	405 021 0501	TR 2SD1012-G	1
Q201	405 021 0501	TR 2SD1012-G	1
Q202	405 011 0009	TR 2SC1571-G-L-NP	1
Q203	405 019 3804	TR 2SC536-G-NP	1
Q204	405 019 3804	TR 2SC536-G-NP	1
Q205	405 010 9904	TR 2SC1571-F-L-NP	1
Q206	405 011 0009	TR 2SC1571-G-L-NP	1
Q207	405 021 0501	TR 2SD1012-G	1
Q301	405 018 0200	TR 2SC3331-U	1
Q307	405 019 3804	TR 2SC536-G-NP	1
Q308	405 019 3804	TR 2SC536-G-NP	1
Q309	405 023 5306	TR 2SD400-F-MP	1
Q310	405 004 4502	TR 2SA608-F-NP	1
Q311	405 029 6505	TR 2SB986-S	1
Q312	405 019 2708	TR 2SC536-F-NP	1
Q313	405 019 2708	TR 2SC536-F-NP	1
C101	403 073 7004	CERAMIC 470P K 50V	1
C102	403 073 7004	CERAMIC 470P K 50V	1
C103	403 072 8200	CERAMIC 330P K 50V	1
C104	403 039 7901	ELECT 100U M 10V	1
C105	403 048 7602	ELECT 0.47U M 50V	1
C106	403 060 8700	POLYESTER 0.033U K 50V	1
C107	403 058 3700	POLYESTER 0.015U K 50V	1
C108	403 042 0302	ELECT 10U M 16V	1
C109	403 042 0302	ELECT 10U M 16V	1
C111	403 074 6303	CERAMIC 560P K 50V	1
C112	403 001 9100	CERAMIC 6800P N 16V	1
C113	403 073 3204	CERAMIC 390P K 50V	1
C114	403 071 6207	CERAMIC 220P K 50V	1
C115	403 039 7901	ELECT 100U M 10V	1
C116	403 049 1609	ELECT 1U M 50V	1
C117	403 061 4404	POLYESTER 0.039U K 50V	1
C118	403 058 3700	POLYESTER 0.015U K 50V	1
C120	403 074 9205	CERAMIC 680P K 50V	1
C121	403 075 3400	CERAMIC 82P K 50V	1
C122	403 071 6207	CERAMIC 220P K 50V	1
C123	403 001 5300	CERAMIC 2200P N 16V	1
C124	403 047 9607	ELECT 0.1U M 50V	1
C126	403 047 9607	ELECT 0.1U M 50V	1
C127	403 049 1609	ELECT 1U M 50V	1
C128	403 042 0302	ELECT 10U M 16V	1
C130	403 049 1609	ELECT 1U M 50V	1
C131	403 069 1207	CERAMIC 1000P K 50V	1
C133	403 039 7901	ELECT 100U M 10V	1
C134	403 022 7703	CERAMIC 33P J 50V	1
C135	403 069 5205	CERAMIC 0.01U K 50V	1
C136	403 039 7901	ELECT 100U M 10V	1
C137	403 058 5803	POLYESTER 0.15U K 50V	1
C138	403 043 3104	ELECT 2200U M 16V	1
C201	403 073 7004	CERAMIC 470P K 50V	1
C202	403 073 7004	CERAMIC 470P K 50V	1
C203	403 072 8200	CERAMIC 330P K 50V	1
C204	403 039 7901	ELECT 100U M 10V	1
C205	403 048 7602	ELECT 0.47U M 50V	1
C206	403 060 8700	POLYESTER 0.033U K 50V	1
C207	403 058 3700	POLYESTER 0.015U K 50V	1
C208	403 042 0302	ELECT 10U M 16V	1
C209	403 042 0302	ELECT 10U M 16V	1
C211	403 074 6303	CERAMIC 560P K 50V	1
C212	403 001 9100	CERAMIC 6800P N 16V	1
C213	403 073 3204	CERAMIC 390P K 50V	1
C214	403 071 6207	CERAMIC 220P K 50V	1
C215	403 039 7901	ELECT 100U M 10V	1
C216	403 049 1609	ELECT 1U M 50V	1
C217	403 061 4404	POLYESTER 0.039U K 50V	1
C218	403 058 3700	POLYESTER 0.015U K 50V	1
C220	403 074 9205	CERAMIC 680P K 50V	1
C221	403 075 3400	CERAMIC 82P K 50V	1
C222	403 071 6207	CERAMIC 220P K 50V	1
C223	403 001 5300	CERAMIC 2200P N 16V	1
C224	403 047 9607	ELECT 0.1U M 50V	1
C226	403 047 9607	ELECT 0.1U M 50V	1
C227	403 049 1609	ELECT 1U M 50V	1
C228	403 042 0302	ELECT 10U M 16V	1
C230	403 049 1609	ELECT 1U M 50V	1
C231	403 069 1207	CERAMIC 1000P K 50V	1
C233	403 039 7901	ELECT 100U M 10V	1
C234	403 022 7703	CERAMIC 33P J 50V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C235	403 069 5205	CERAMIC 0.01U K 50V	1
C236	403 039 7901	ELECT 100U M 10V	1
C237	403 058 5803	POLYESTER 0.15U K 50V	1
C238	403 043 3104	ELECT 2200U M 16V	1
C301	403 040 2704	ELECT 22U M 10V	1
C302	403 040 2704	ELECT 22U M 10V	1
C303	403 040 4807	ELECT 220U M 10V	1
C304	403 040 4807	ELECT 220U M 10V	1
C305	403 040 4807	ELECT 220U M 10V	1
C306	403 040 2704	ELECT 22U M 10V	1
C307	403 042 0302	ELECT 10U M 16V	1
C308	403 062 0900	POLYESTER 0.047U K 50V	1
C309	403 049 1609	ELECT 1U M 50V	1
C310	403 049 1609	ELECT 1U M 50V	1
C311	403 069 5205	CERAMIC 0.01U K 50V	1
C312	403 069 5205	CERAMIC 0.01U K 50V	1
C313	403 081 2602	POLYPRO 2200P J 100V	1
C314	403 069 1207	CERAMIC 1000P K 50V	1
C315	403 060 6607	POLYESTER 3300P K 50V	1
C327	403 049 1609	ELECT 1U M 50V	1
C329	403 039 7901	ELECT 100U M 10V	1
C330	403 043 1100	ELECT 220U M 16V	1
C331	403 049 1609	ELECT 1U M 50V	1
C333	403 049 1609	ELECT 1U M 50V	1
C334	403 049 1609	ELECT 1U M 50V	1
C335	403 040 4807	ELECT 220U M 10V	1
C338	403 040 4807	ELECT 220U M 10V	1
C339	403 003 2802	CERAMIC 0.022U K 25V	1
C340	403 046 0605	ELECT 2200U M 25V	1
C341	403 003 2802	CERAMIC 0.022U K 25V	1
C342	403 069 0705	CERAMIC 1000P K 50V	1
C343	403 042 3600	ELECT 100U M 16V	1
C344	403 049 1609	ELECT 1U M 50V	1
R101	401 031 0807	CARBON 36 JA 1/8W	1
R102	401 013 7305	CARBON 120K JA 1/4W	1
R103	401 028 3705	CARBON 10K JA 1/8W	1
R104	401 031 6601	CARBON 4.7K JA 1/8W	1
R106	401 019 1901	CARBON 3.9K JA 1/4W	1
R107	401 020 2003	CARBON 4.7K JA 1/4W	1
R108	401 031 9008	CARBON 5.1K JA 1/8W	1
R110	401 028 3200	CARBON 1K JA 1/8W	1
R111	401 031 7202	CARBON 47K JA 1/8W	1
R112	401 032 0608	CARBON 5.6K JA 1/8W	1
R113	401 028 4207	CARBON 100K JA 1/8W	1
R115	401 031 0203	CARBON 330K JA 1/8W	1
R116	401 030 4202	CARBON 2.7K JA 1/8W	1
R117	401 029 0406	CARBON 150 JA 1/8W	1
R118	401 031 6601	CARBON 4.7K JA 1/8W	1
R119	401 028 4207	CARBON 100K JA 1/8W	1
R120	401 030 4707	CARBON 27K JA 1/8W	1
R121	401 031 5000	CARBON 43K JA 1/8W	1
R122	401 030 4707	CARBON 27K JA 1/8W	1
R123	401 029 5500	CARBON 18K JA 1/8W	1
R124	401 030 0709	CARBON 22K JA 1/8W	1
R125	401 030 4707	CARBON 27K JA 1/8W	1
R126	401 030 8705	CARBON 330 JA 1/8W	1
R127	401 028 3705	CARBON 10K JA 1/8W	1
R128	401 028 6607	CARBON 120 JA 1/8W	1
R129	401 028 2104	CARBON 10 JA 1/8W	1
R130	401 028 3200	CARBON 1K JA 1/8W	1
R131	401 031 6601	CARBON 4.7K JA 1/8W	1
R132	401 028 7604	CARBON 12K JA 1/8W	1
R133	401 031 9206	CARBON 51K JA 1/8W	1
R134	401 016 4806	CARBON 22K JA 1/4W	1
R135	401 032 7102	CARBON 75K JA 1/8W	1
R137	401 028 3200	CARBON 1K JA 1/8W	1
R138	401 031 6601	CARBON 4.7K JA 1/8W	1
R139	401 032 1506	CARBON 560K JA 1/8W	1
R140	401 028 3705	CARBON 10K JA 1/8W	1
R141	401 030 8705	CARBON 330 JA 1/8W	1
R142	401 028 3200	CARBON 1K JA 1/8W	1
R144	401 030 0709	CARBON 22K JA 1/8W	1
R146	401 031 1903	CARBON 390 JA 1/8W	1
R147	401 030 0709	CARBON 22K JA 1/8W	1
R148	401 021 0701	CARBON 56 JA 1/4W	1
R149	401 099 0405	CARBON 0.47 JA 1/8W	1
R150	401 028 4207	CARBON 100K JA 1/8W	1
R201	401 031 0807	CARBON 36 JA 1/8W	1
R202	401 013 7305	CARBON 120K JA 1/4W	1
R203	401 028 3705	CARBON 10K JA 1/8W	1
R204	401 031 6601	CARBON 4.7K JA 1/8W	1
R206	401 019 1901	CARBON 3.9K JA 1/4W	1
R207	401 020 2003	CARBON 4.7K JA 1/4W	1
R208	401 031 9008	CARBON 5.1K JA 1/8W	1
R210	401 028 3200	CARBON 1K JA 1/8W	1
R211	401 031 7202	CARBON 47K JA 1/8W	1
R212	401 032 0608	CARBON 5.6K JA 1/8W	1
R213	401 028 4207	CARBON 100K JA 1/8W	1
R215	401 031 0203	CARBON 330K JA 1/8W	1
R216	401 030 4202	CARBON 2.7K JA 1/8W	1
R217	401 029 0406	CARBON 150 JA 1/8W	1
R218	401 031 6601	CARBON 4.7K JA 1/8W	1
R219	401 028 4207	CARBON 100K JA 1/8W	1
R220	401 030 4707	CARBON 27K JA 1/8W	1
R221	401 031 5000	CARBON 43K JA 1/8W	1
R222	401 030 4707	CARBON 27K JA 1/8W	1
R223	401 029 5500	CARBON 18K JA 1/8W	1
R224	401 030 0709	CARBON 22K JA 1/8W	1
R225	401 030 4707	CARBON 27K JA 1/8W	1
R226	401 030 8705	CARBON 330 JA 1/8W	1
R227	401 028 3705	CARBON 10K JA 1/8W	1
R228	401 028 6607	CARBON 120 JA 1/8W	1
R229	401 028 2104	CARBON 10 JA 1/8W	1
R230	401 028 3200	CARBON 1K JA 1/8W	1
R231	401 031 6601	CARBON 4.7K JA 1/8W	1
R232	401 028 7604	CARBON 12K JA 1/8W	1
R233	401 031 9206	CARBON 51K JA 1/8W	1
R234	401 016 4806	CARBON 22K JA 1/4W	1
R235	401 032 7102	CARBON 75K JA 1/8W	1
R237	401 028 3200	CARBON 1K JA 1/8W	1
R238	401 031 6601	CARBON 4.7K JA 1/8W	1
R239	401 032 1506	CARBON 560K JA 1/8W	1
R240	401 028 3705	CARBON 10K JA 1/8W	1
R241	401 030 8705	CARBON 330 JA 1/8W	1
R242	401 028 3200	CARBON 1K JA 1/8W	1
R244	401 030 0709	CARBON 22K JA 1/8W	1
R246	401 031 1903	CARBON 390 JA 1/8W	1
R247	401 030 0709	CARBON 22K JA 1/8W	1
R248	401 021 0701	CARBON 56 JA 1/4W	1
R249	401 099 0405	CARBON 0.47 JA 1/8W	1
R250	401 028 4207	CARBON 100K JA 1/8W	1
R301	401 028 2609	CARBON 100 JA 1/8W	1
R302	401 028 2609	CARBON 100 JA 1/8W	1
R303	401 028 2104	CARBON 10 JA 1/8W	1
R304	401 012 4503	CARBON 100 JA 1/4W	1
R305	401 032 0608	CARBON 5.6K JA 1/8W	1
R307	401 031 6601	CARBON 4.7K JA 1/8W	1
R318	401 030 0709	CARBON 22K JA 1/8W	1
R321	401 020 7503	CARBON 51 JA 1/4W	1
R322	401 031 5505	CARBON 47 JA 1/8W	1
R323	401 030 0204	CARBON 2.2K JA 1/8W	1
R324	401 029 7306	CARBON 2.7 JA 1/8W	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
R327	401 016 3809	CARBON 2.2K JA 1/4W	1
R328	401 012 8105	CARBON 100K JA 1/4W	1
R329	401 016 4806	CARBON 22K JA 1/4W	1
R330	401 028 3705	CARBON 10K JA 1/8W	1
R331	401 028 4207	CARBON 100K JA 1/8W	1
R332	401 030 4707	CARBON 27K JA 1/8W	1
R333	401 030 4707	CARBON 27K JA 1/8W	1
R335	401 031 6106	CARBON 470 JA 1/8W	1
R336	401 022 7204	CARBON 750 JA 1/4W	1
R337	401 029 4503	CARBON 180 JA 1/8W	1
R338	401 031 0609	CARBON 3.3M JA 1/8W	1
R339	401 030 9702	CARBON 33K JA 1/8W	1
R340	401 012 5708	CARBON 1K JA 1/4W	1
R341	401 028 4207	CARBON 100K JA 1/8W	1
R343	401 031 2405	CARBON 3.9K JA 1/8W	1
R344	401 031 2405	CARBON 3.9K JA 1/8W	1
R345	401 031 2405	CARBON 3.9K JA 1/8W	1
R346	401 060 3305	OXIDE-MT 220 JA 1W	1
R347	401 028 4207	CARBON 100K JA 1/8W	1
R348	401 028 4207	CARBON 100K JA 1/8W	1
R349	401 028 4207	CARBON 100K JA 1/8W	1

NOTE:
There are two types of MW255L.
One type of MW255L includes the EXT ANT jack and DX/LOCAL switch on the back side of the unit, and another type of MW255L excludes the EXT ANT jack and DX/LOCAL switch on the back side of the unit. Be careful to each Parts List.

RADIO TUNER P.C.B. ASSY
(The Model of EXT ANT jack supplied)

62	141-0-1939-25070	Radio Tuner P.C.B. Assy	1
	141-2-3229-67800	Shield Plate	1
CN1	4-2369-74920	Plug 6P	1
CN2	4-2369-74980	Plug 7P	1
CN3	4-2369-75130	Plug 9P	1
CN308	4-2352-03280	Connector 6P Assy	1
SW1	4-2319-77750	Lever Switch (Band Select)	1
SW2	4-2319-78940	Push Switch (FM Mode)	1
BPF1	4-2539-71021	Band Pass Filter	1
L1	4-2599-70810	RF Coil	1
L2	4-2589-71960	FM OSC Trans	1
L3	4-2532-00040	Choke Coil (1mH)	1
L4	4-2579-72760	Bar Antenna	1
L5	4-2539-72720	Choke Coil (6.8μH)	1
T1	4-2569-71631	IFT FM	1
T2	4-2569-72270	IFT FM	1
T3	4-2569-71350	IFT AM	1
T4	4-2579-70726	ANT Coil SW	1
T5	4-2589-71424	OSC Trans SW	1
T6	4-2589-71418	OSC Trans MW	1
T7	4-2589-71402	OSC Trans LW	1
CF1	4-2539-70884	Ceramic Filter	1
CF2	4-2539-70686	Mech Filter D460BL	1
CF3	4-2539-72710	Ceramic Filter 460K	1
CF4	4-2539-70884	Ceramic Filter	1
TC1	4-2249-70580	Trimmer Condenser	1
TC2	4-2249-70580	Trimmer Condenser	1
TC3	4-2249-70590	Trimmer Condenser	1
TC4	4-2249-70580	Trimmer Condenser	1
P1	4-2229-72969	Potentiometer (B-30kΩ)	1
P2	4-2229-72969	Potentiometer (B-30kΩ)	1
P3	4-2229-73060	Potentiometer (B-10kΩ)	1
TP1	4-2369-73781	Pin 1P	1
TP2	4-2369-73781	Pin 1P	1
TP10	4-2369-73781	Pin 1P	1

Ref. No.	Part No.	Description	Q'ty

NOTE:
The **D1** consists of 1/2 D1 and 1/2 D1 which have the equivalent characteristics. When replacing, obtain a new pair of D1 (1/2 D1 and 1/2 D1) together.

D1	407 065 0509	VARACTOR DI KV1330A	1
D2	407 061 6307	DIODE KV1260	1
D3	407 061 2309	DIODE 1SS95	1
D4	407 061 2309	DIODE 1SS95	1
D5	407 061 2309	DIODE 1SS95	1
D6	407 061 2309	DIODE 1SS95	1
D7	407 061 2309	DIODE 1SS95	1
D8	407 061 2309	DIODE 1SS95	1
D9	407 061 2309	DIODE 1SS95	1
D10	407 065 1308	ZENER DIODE MTZJ3.6B	1
D11	407 061 2309	DIODE 1SS95	1
D14	407 061 2309	DIODE 1SS95	1
IC1	409 068 3006	IC BA4412	1
IC2	409 016 2105	IC LA1265	1
IC3	409 068 0500	IC BA1335	1
Q1	405 026 8304	TR 2SK212-E	1
Q2	405 021 0600	TR 2SD1012-G-SPA	1
Q3	405 004 4502	TR 2SA608-F-NP	1
Q4	405 013 0403	TR 2SC2063-P	1
C1	403 033 2605	CERAMIC 8.2P K 50V	1
C2	403 069 1207	CERAMIC 1000P K 50V	1
C3	403 009 1809	CERAMIC 10P J 50V	1
C4	403 001 2309	CERAMIC 0.01U N 16V	1
C5	403 069 1504	CERAMIC 1000P K 50V	1
C6	403 001 2309	CERAMIC 0.01U N 16V	1
C7	403 001 2309	CERAMIC 0.01U N 16V	1
C8	403 069 1207	CERAMIC 1000P K 50V	1
C9	403 012 6006	CERAMIC 15P J 50V	1
C10	403 012 6006	CERAMIC 15P J 50V	1
C11	403 027 8002	CERAMIC 5.6P K 50V	1
C12	403 069 1207	CERAMIC 1000P K 50V	1
C13	403 069 1207	CERAMIC 1000P K 50V	1
C14	403 039 7802	ELECT 100U M 10V	1
C15	403 001 2309	CERAMIC 0.01U N 16V	1
C16	403 001 2309	CERAMIC 0.01U N 16V	1
C17	403 001 5805	CERAMIC 0.022U N 16V	1
C18	403 050 7706	ELECT 3.3U M 50V	1
C19	403 051 2007	ELECT 4.7U M 50V	1
C20	403 050 7706	ELECT 3.3U M 50V	1
C21	403 042 0302	ELECT 10U M 16V	1
C22	403 001 2309	CERAMIC 0.01U N 16V	1
C23	403 049 1609	ELECT 1U M 50V	1
C24	403 042 0302	ELECT 10U M 16V	1
C25	403 042 0302	ELECT 10U M 16V	1
C26	403 001 2309	CERAMIC 0.01U N 16V	1
C27	403 049 1609	ELECT 1U M 50V	1
C28	403 004 0609	CERAMIC 0.047U K 25V	1
C29	403 082 4001	POLYPRO 680P J 100V	1
C30	403 048 3109	ELECT 0.22U M 50V	1
C31	403 048 7602	ELECT 0.47U M 50V	1
C32	403 049 1609	ELECT 1U M 50V	1
C33	403 001 2309	CERAMIC 0.01U N 16V	1
C34	403 001 2309	CERAMIC 0.01U N 16V	1
C35	403 001 2309	CERAMIC 0.01U N 16V	1
C36	403 001 2309	CERAMIC 0.01U N 16V	1
C37	403 047 9607	ELECT 0.1U M 50V	1
C38	403 047 9607	ELECT 0.1U M 50V	1
C39	403 041 5605	ELECT 470U M 10V	1
C40	403 051 2007	ELECT 4.7U M 50V	1
C41	403 040 2704	ELECT 22U M 10V	1
C42	403 039 7802	ELECT 100U M 10V	1
C43	403 042 0302	ELECT 10U M 16V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C44	403 001 2309	CERAMIC 0.01U N 16V	1
C45	403 012 6501	CERAMIC 15P J 50V	1
C46	403 001 5805	CERAMIC 0.022U N 16V	1
C47	403 009 1809	CERAMIC 10P J 50V	1
C48	403 022 7703	CERAMIC 33P J 50V	1
C49	403 028 3402	CERAMIC 56P J 50V	1
C50	403 081 9403	POLYPRO 3900P J 100V	1
C51	403 111 7508	POLYPRO 430P J 100V	1
C52	403 081 4200	POLYPRO 260P J 100V	1
C53	403 009 1809	CERAMIC 10P J 50V	1
C54	403 010 7807	CERAMIC 12P J 50V	1
C55	403 014 7902	CERAMIC 180P J 50V	1
C56	403 001 2309	CERAMIC 0.01U N 16V	1
C57	403 069 1207	CERAMIC 1000P K 50V	1
C58	403 001 5805	CERAMIC 0.022U N 16V	1
C59	403 033 2605	CERAMIC 8.2P K 50V	1
C60	403 069 1207	CERAMIC 1000P K 50V	1
C61	403 068 9402	CERAMIC 100P K 50V	1
C62	403 001 2309	CERAMIC 0.01U N 16V	1
C63	403 039 7802	ELECT 100U M 10V	1
C64	403 042 0302	ELECT 10U M 16V	1
C65	403 022 7703	CERAMIC 33P J 50V	1
C66	403 016 2004	CERAMIC 2.2P K 50V	1
C67	403 069 1207	CERAMIC 1000P K 50V	1
R1	401 012 5708	CARBON 1K JA 1/4W	1
R2	401 028 4207	CARBON 100K JA 1/8W	1
R3	401 028 4207	CARBON 100K JA 1/8W	1
R4	401 028 2104	CARBON 10 JA 1/8W	1
R5	401 029 7603	CARBON 20 JA 1/8W	1
R6	401 030 9702	CARBON 33K JA 1/8W	1
R7	401 031 7202	CARBON 47K JA 1/8W	1
R8	401 028 4702	CARBON 1M JA 1/8W	1
R9	401 014 2903	CARBON 150 JA 1/4W	1
R10	401 012 4503	CARBON 100 JA 1/4W	1
R11	401 032 0608	CARBON 5.6K JA 1/8W	1
R12	401 032 5108	CARBON 68K JA 1/8W	1
R13	401 012 7009	CARBON 10K JA 1/4W	1
R14	401 015 3800	CARBON 18K JA 1/4W	1
R15	401 012 7009	CARBON 10K JA 1/4W	1
R16	401 028 3705	CARBON 10K JA 1/8W	1
R17	401 031 6601	CARBON 4.7K JA 1/8W	1
R18	401 032 5108	CARBON 68K JA 1/8W	1
R19	401 028 4207	CARBON 100K JA 1/8W	1
R20	401 030 9702	CARBON 33K JA 1/8W	1
R21	401 030 9207	CARBON 3.3K JA 1/8W	1
R22	401 029 1502	CARBON 15K JA 1/8W	1
R23	401 028 3200	CARBON 1K JA 1/8W	1
R24	401 028 3705	CARBON 10K JA 1/8W	1
R25	401 031 6106	CARBON 470 JA 1/8W	1
R26	401 031 2405	CARBON 3.9K JA 1/8W	1
R27	401 031 2405	CARBON 3.9K JA 1/8W	1
R28	401 030 0204	CARBON 2.2K JA 1/8W	1
R29	401 030 0204	CARBON 2.2K JA 1/8W	1
R30	401 030 9702	CARBON 33K JA 1/8W	1
R31	401 030 9702	CARBON 33K JA 1/8W	1
R32	401 032 0103	CARBON 560 JA 1/8W	1
R33	401 056 2909	OXIDE-MT 47 JB 1/2W	1
R34	401 028 2609	CARBON 100 JA 1/8W	1
R35	401 028 2609	CARBON 100 JA 1/8W	1
R36	401 028 4207	CARBON 100K JA 1/8W	1
R37	401 029 9706	CARBON 220 JA 1/8W	1
R38	401 028 4702	CARBON 1M JA 1/8W	1
R39	401 016 1508	CARBON 22 JA 1/4W	1
R40	401 016 3809	CARBON 2.2K JA 1/4W	1
R41	401 029 9102	CARBON 22 JA 1/8W	1
R42	401 032 4002	CARBON 680 JA 1/8W	1
R43	401 028 4207	CARBON 100K JA 1/8W	1
R44	401 031 7202	CARBON 47K JA 1/8W	1
R46	401 012 4503	CARBON 100 JA 1/4W	1
R48	401 056 2909	OXIDE-MT 47 JB 1/2W	1
R49	401 028 3200	CARBON 1K JA 1/8W	1
R50	401 032 7805	CARBON 82 JA 1/8W	1
R51	401 031 7202	CARBON 47K JA 1/8W	1
R52	401 031 7202	CARBON 47K JA 1/8W	1
R53	401 032 4002	CARBON 680 JA 1/8W	1
R54	401 030 9702	CARBON 33K JA 1/8W	1
R55	401 029 9102	CARBON 22 JA 1/8W	1

RADIO TUNER P.C.B. ASSY
(The Model of EXT ANT jack excluded)

62	141-0-1939-25072	Radio Tuner P.C.B. Assy	1
TP10	Not Used		

NOTE:
As for other parts, refer to the Parts List for the model of EXT ANT jack supplied.

CONTROL TUNER P.C.B. ASSY

63	141-0-1939-25080	Control Tuner P.C.B. Assy	1
	141-2-3229-67900	Shield Plate	1
CN1	4-2352-02638	Connector 6P Assy	1
CN2	4-2352-02357	Connector 7P Assy	1
CN3	4-2352-03290	Connector 9P Assy	1
CN305	4-2352-02810	Connector 4P Assy	1
SW401	4-2312-05300	Keyboard Switch 6mm	1
SW402	4-2312-05300	Keyboard Switch 6mm	1
SW403	4-2312-05300	Keyboard Switch 6mm	1
SW404	4-2312-05300	Keyboard Switch 6mm	1
SW406	4-2312-05300	Keyboard Switch 6mm	1
SW407	4-2312-05300	Keyboard Switch 6mm	1
SW408	4-2312-05300	Keyboard Switch 6mm	1
SW409	4-2312-05300	Keyboard Switch 6mm	1
SW410	4-2312-06010	Keyboard Switch 12mm	1
SW411	4-2312-06010	Keyboard Switch 12mm	1
SW412	4-2312-05300	Keyboard Switch 6mm	1
SW413	4-2312-05300	Keyboard Switch 6mm	1
SW414	4-2312-05300	Keyboard Switch 6mm	1
SW415	4-2312-05300	Keyboard Switch 6mm	1
LC401	4-9549-70191	LCD	1
TC401	4-2249-70812	Tremmer Condenser	1
X401	4-2259-71110	Crystal 75kHz	1
D401	407 061 2200	DIODE 1SS254-TA	1
D402	407 061 2200	DIODE 1SS254-TA	1
D403	407 061 2200	DIODE 1SS254-TA	1
D404	407 061 2200	DIODE 1SS254-TA	1
D405	407 061 2200	DIODE 1SS254-TA	1
D406	407 061 2200	DIODE 1SS254-TA	1
D407	407 061 2200	DIODE 1SS254-TA	1
D408	407 061 2200	DIODE 1SS254-TA	1
D409	407 090 8709	LED LN249RPH	1
D410	407 090 8709	LED LN249RPH	1
IC401	409 074 3205	IC UPD1715G-011	1
Q401	405 012 8608	TR 2SC2021-S	1
Q402	405 012 8608	TR 2SC2021-S	1
Q403	405 012 8608	TR 2SC2021-S	1
Q404	405 012 8608	TR 2SC2021-S	1
C401	403 022 7703	CERAMIC 33P J 50V	1
C402	403 001 2309	CERAMIC 0.01U N 16V	1

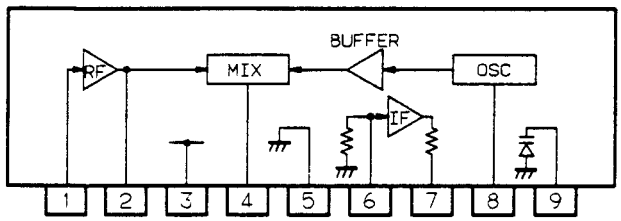
P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C403	403 001 2309	CERAMIC 0.01U N 16V	1
C404	403 001 2309	CERAMIC 0.01U N 16V	1
C405	403 054 0109	ELECT 4.7U M 35V	1
C406	403 050 1605	ELECT 2.2U M 50V	1
C407	404 029 1503	CERAMIC 0.047U Z 50V	1
C408	404 029 1503	CERAMIC 0.047U Z 50V	1
C409	403 003 2901	CERAMIC 0.022U K 25V	1
C411	403 042 0302	ELECT 10U M 16V	1
C412	403 008 5204	CERAMIC 10P D 50V	1
C413	403 001 2309	CERAMIC 0.01U N 16V	1
C414	404 029 1503	CERAMIC 0.047U Z 50V	1
C416	403 072 8200	CERAMIC 330P K 50V	1
C417	403 068 9402	CERAMIC 100P K 50V	1
C418	403 072 8200	CERAMIC 330P K 50V	1
C419	403 069 1207	CERAMIC 1000P K 50V	1
R401	401 030 0204	CARBON 2.2K JA 1/8W	1
R402	401 030 0204	CARBON 2.2K JA 1/8W	1
R403	401 028 2609	CARBON 100 JA 1/8W	1
R404	401 028 3705	CARBON 10K JA 1/8W	1
R405	401 030 8705	CARBON 330 JA 1/8W	1
R406	401 028 3705	CARBON 10K JA 1/8W	1
R407	401 028 2609	CARBON 100 JA 1/8W	1
R408	401 028 3705	CARBON 10K JA 1/8W	1
R409	401 030 9207	CARBON 3.3K JA 1/8W	1
R410	401 030 9207	CARBON 3.3K JA 1/8W	1
R411	401 030 9702	CARBON 33K JA 1/8W	1
R412	401 030 4202	CARBON 2.7K JA 1/8W	1
	LED P.C.B. ASSY		
64	141-0-1939-25082	LED P.C.B. Assy	1
D411	407 062 7006	LED SEL1413E	1
D412	407 062 7006	LED SEL1413E	1
D413	407 062 7006	LED SEL1413E	1
	GRAPHIC EQUALIZER P.C.B. ASSY		
65	141-0-1939-22402	Graphic Equalizer P.C.B. Assy	1
L501	4-2539-71690	Coil (15mH)	1
L601	4-2539-71690	Coil (15mH)	1
VR501	4-2229-77240	Slide Volume (B-50kΩ)	1
VR601	4-2229-77240	Slide Volume (B-50kΩ)	1
VR701	4-2229-77230	Slide Volume (SW-50kΩx2)	1
VR702	4-2229-77230	Slide Volume (SW-50kΩx2)	1
VR703	4-2229-77230	Slide Volume (SW-50kΩx2)	1
VR704	4-2229-77230	Slide Volume (SW-50kΩx2)	1
VR705	4-2229-77230	Slide Volume (SW-50kΩx2)	1
IC701	409 068 2009	IC BA3824LS	1
C501	403 047 1502	ELECT 4.7U M 25V	1
C502	403 069 0705	CERAMIC 1000P K 50V	1
C503	403 047 1502	ELECT 4.7U M 25V	1
C504	403 048 7602	ELECT 0.47U M 50V	1
C505	403 060 8700	POLYESTER 0.033U K 50V	1
C506	403 048 3109	ELECT 0.22U M 50V	1
C507	403 063 0503	POLYESTER 6800P K 50V	1
C508	403 063 2606	POLYESTER 0.068U K 50V	1
C509	403 059 4102	POLYESTER 2200P K 50V	1
C510	403 059 6601	POLYESTER 0.022U K 50V	1
C511	403 074 9007	CERAMIC 680P K 50V	1
C512	403 058 3700	POLYESTER 0.015U K 50V	1
C513	403 047 1502	ELECT 4.7U M 25V	1
C514	403 060 6607	POLYESTER 3300P K 50V	1
C515	403 063 2606	POLYESTER 0.068U K 50V	1
C601	403 047 1502	ELECT 4.7U M 25V	1
C602	403 069 0705	CERAMIC 1000P K 50V	1
C603	403 047 1502	ELECT 4.7U M 25V	1
C604	403 048 7602	ELECT 0.47U M 50V	1
C605	403 060 8700	POLYESTER 0.033U K 50V	1

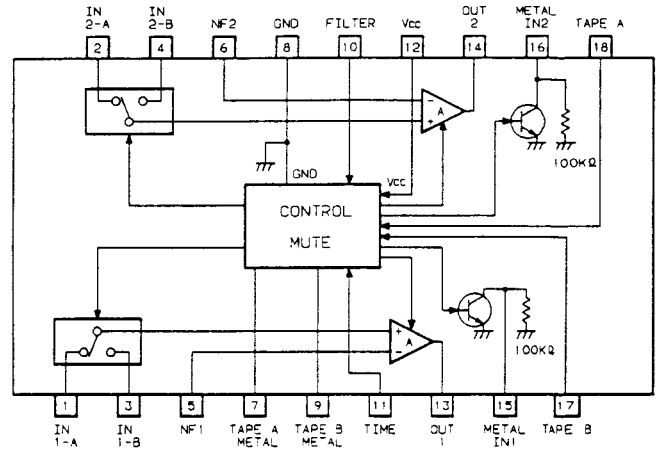
Ref. No.	Part No.	Description	Q'ty
C606	403 048 3109	ELECT 0.22U M 50V	1
C607	403 063 0503	POLYESTER 6800P K 50V	1
C608	403 063 2606	POLYESTER 0.068U K 50V	1
C609	403 059 4102	POLYESTER 2200P K 50V	1
C610	403 059 6601	POLYESTER 0.022U K 50V	1
C611	403 074 9007	CERAMIC 680P K 50V	1
C612	403 058 3700	POLYESTER 0.015U K 50V	1
C613	403 047 1502	ELECT 4.7U M 25V	1
C614	403 060 6607	POLYESTER 3300P K 50V	1
C615	403 063 2606	POLYESTER 0.068U K 50V	1
C701	403 041 5704	ELECT 470U M 10V	1
R501	401 029 0901	CARBON 1.5K JA 1/8W	1
R502	401 030 8705	CARBON 330 JA 1/8W	1
R503	401 030 9207	CARBON 3.3K JA 1/8W	1
R601	401 029 0901	CARBON 1.5K JA 1/8W	1
R602	401 030 8705	CARBON 330 JA 1/8W	1
R603	401 030 9207	CARBON 3.3K JA 1/8W	1
R701	401 028 2609	CARBON 100 JA 1/8W	1
	POWER P.C.B. ASSY		
66	141-0-1939-24861	Power P.C.B. Assy	1
	⚠ 4-2352-01940	Fuse Clip	2
	4-2359-79040	Socket Wire Assy	1
CN307	4-2352-02880	Connector 2P Assy	1
F901	⚠ 4-2349-70260	Fuse, T2A	1
J901	⚠ 4-2359-75682	AC/DC Power Socket	1
S901	⚠ 4-2319-75770	Rotary Switch (Voltage Select)	1
D901	407 005 2105	DIODE DS135D-KB3	1
D902	407 005 2105	DIODE DS135D-KB3	1
D903	407 005 2105	DIODE DS135D-KB3	1
D904	407 005 2105	DIODE DS135D-KB3	1
D905	407 063 9207	ZENER DIODE MTZJ7.5B	1
C901	403 074 2701	CERAMIC 0.047U Z 50V	1
C902	403 074 2701	CERAMIC 0.047U Z 50V	1
C903	403 074 2701	CERAMIC 0.047U Z 50V	1
C904	403 074 2701	CERAMIC 0.047U Z 50V	1
C905	403 039 7901	ELECT 100U M 10V	1
C906	403 042 3600	ELECT 100U M 16V	1
R901	401 100 2008	OXIDE-MT 100 JB 1W	1
R902	401 019 9600	CARBON 47 JA 1/4W	1
	CONTROL P.C.B. ASSY		
101	141-0-1939-24020	Control P.C.B. Assy	1
CN304	4-2352-02933	Connector 8P Assy	1
F801	4-2349-70570	Protector, ICP-N15	1
S801	4-2319-73990	Leaf Switch (High Speed)	1
L801	4-2539-70301	Micro Inductor	1
L802	4-2659-70432	Choke Coil Ring	1
P801	4-2229-72965	Potentiometer (B-3kΩ)	1
D801	407 061 2309	DIODE 1SS95	1
D802	407 061 2309	DIODE 1SS95	1
D803	407 063 8408	ZENER DIODE MTZJ12C	1
Q801	405 024 9907	TR 2SD734-F	1
Q802	405 018 0101	TR 2SC3331-T	1
Q803	405 019 2708	TR 2SC536-F-NP	1
Q804	405 019 2708	TR 2SC536-F-NP	1
C801	403 044 0300	ELECT 47U M 16V	1
C802	403 042 3600	ELECT 100U M 16V	1
R801	401 031 6106	CARBON 470 JA 1/8W	1
R802	401 028 3705	CARBON 10K JA 1/8W	1
R803	401 029 5005	CARBON 1.8K JA 1/8W	1
R804	401 030 0709	CARBON 22K JA 1/8W	1
R805	401 030 0709	CARBON 22K JA 1/8W	1
R806	401 030 0204	CARBON 2.2K JA 1/8W	1
R807	401 030 0709	CARBON 22K JA 1/8W	1
R808	401 033 0409	CARBON 910 JA 1/8W	1

IC BLOCK DIAGRAM

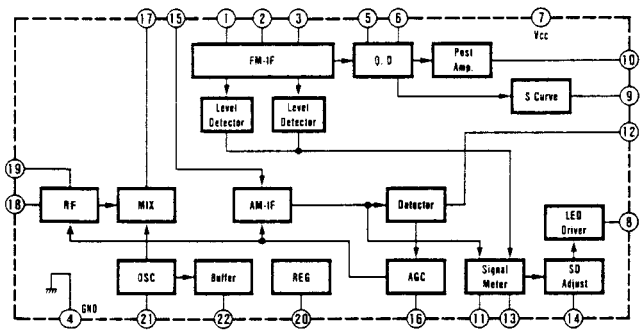
BA4412 BLOCK DIAGRAM



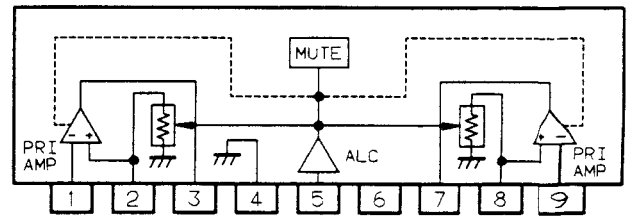
BA3416BL BLOCK DIAGRAM



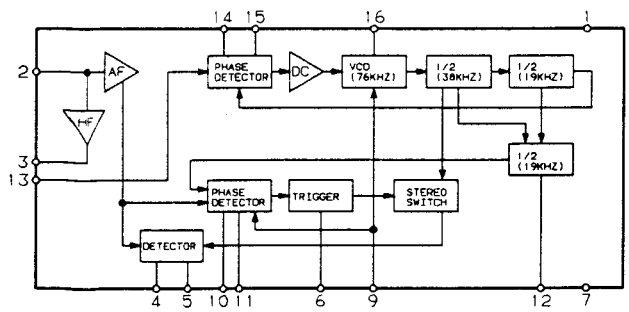
LA1265 BLOCK DIAGRAM



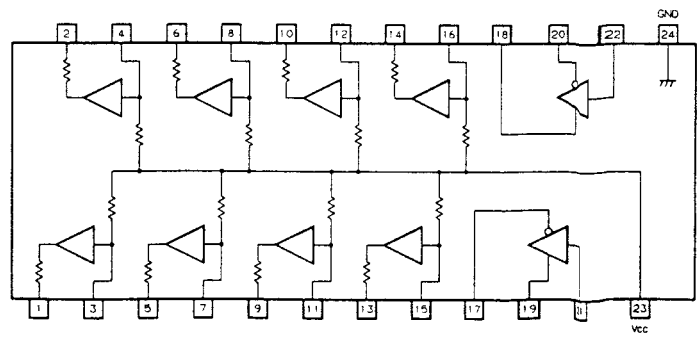
BA3306 BLOCK DIAGRAM



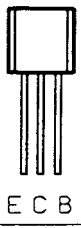
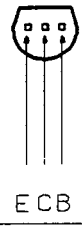
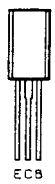
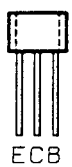
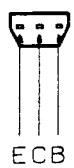
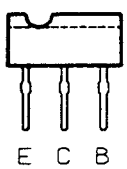
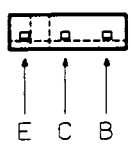
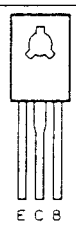
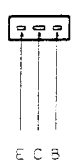
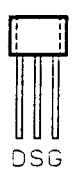
BA1335 BLOCK DIAGRAM



BA3824LS BLOCK DIAGRAM



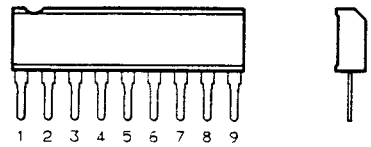
IC & TRANSISTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA608 2SC536 2SC1571 2SC3331 2SD734		
2SD400		
2SD1012		
2SC2063		
2SB986		
2SK212		

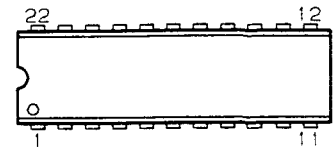
TERMINAL NAME

B — BASE
C — COLLECTOR
E — EMITTER
G — GATE
D — DRAIN
S — SOURCE

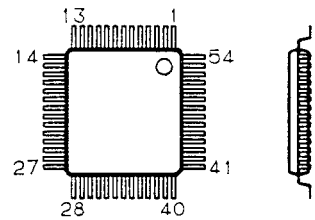
BA3306
BA4412 } **FRONT/SIDE VIEWS**



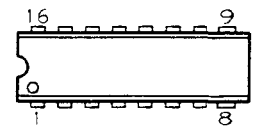
LA1265 TOP VIEW



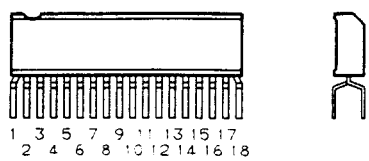
UPD1715G-011 TOP/SIDE VIEWS



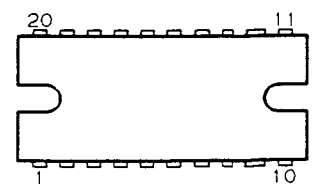
BA1335 TOP VIEW



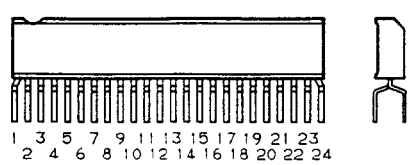
BA3416BL FRONT/SIDE VIEWS



LA4505 TOP VIEW

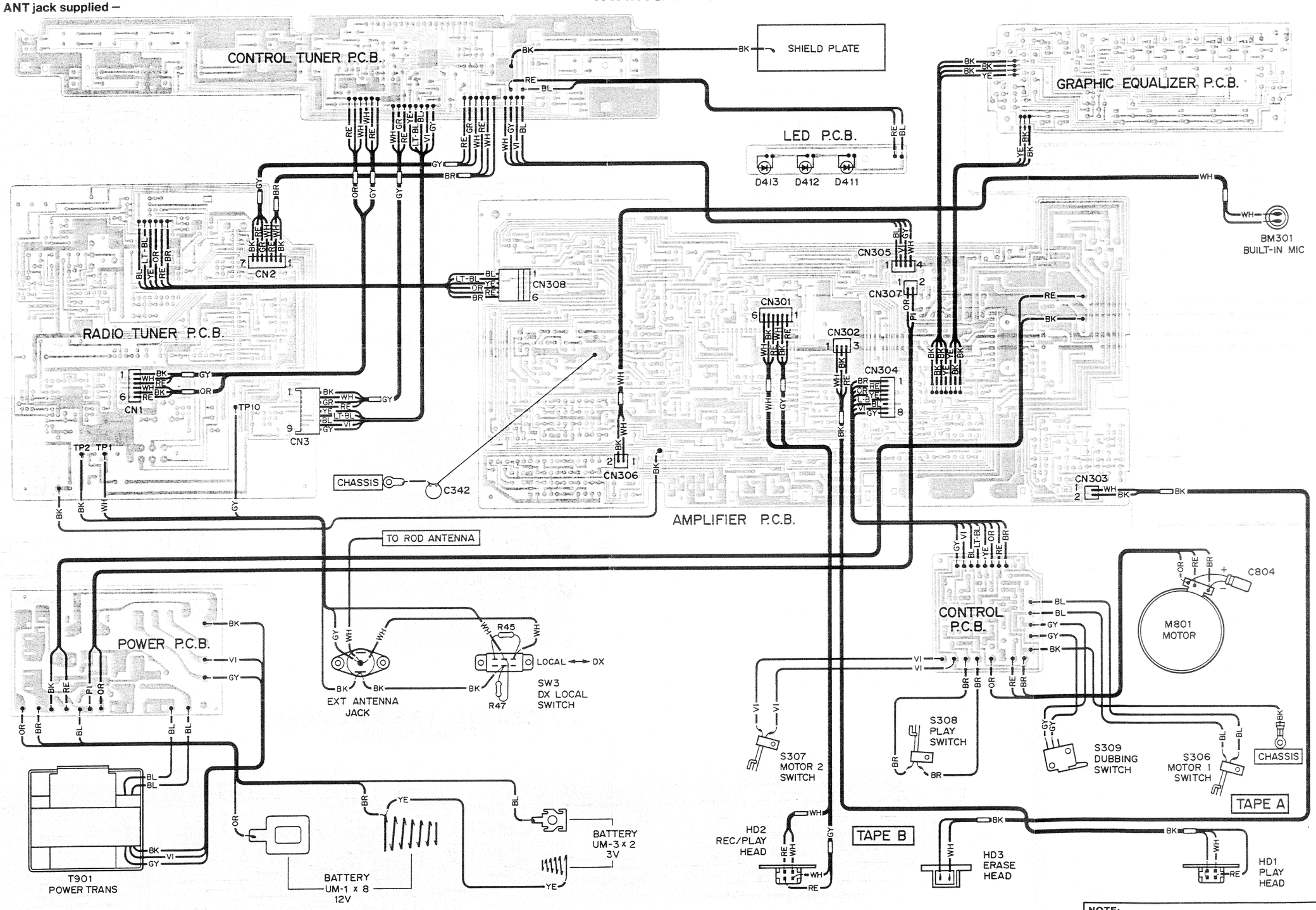


BA3824LS FRONT/SIDE VIEWS



WIRING DIAGRAM

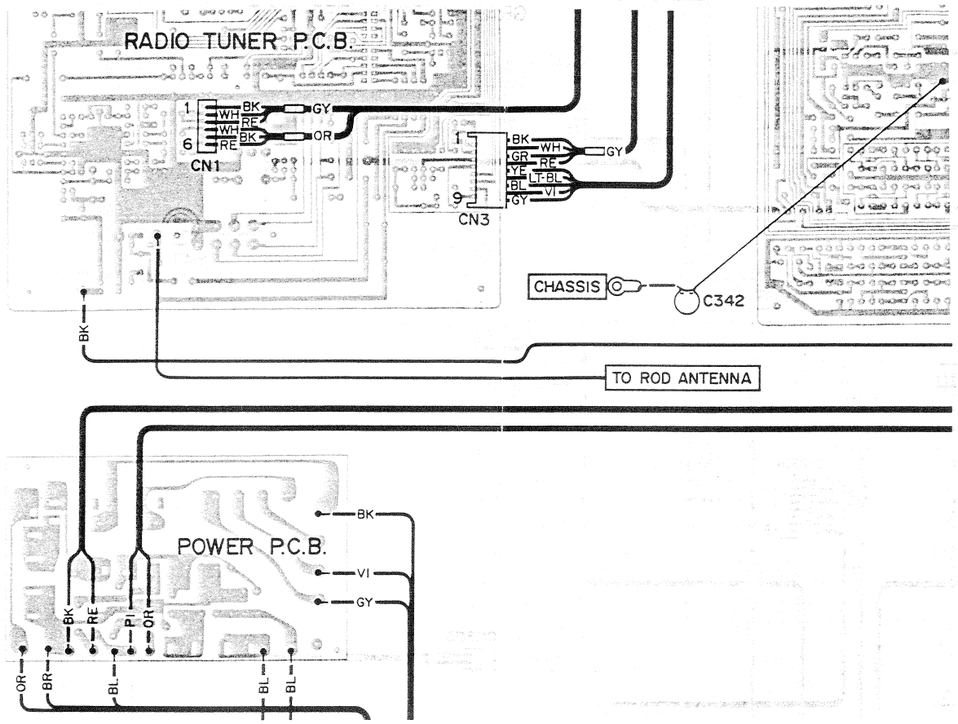
– The model of EXT ANT jack supplied –



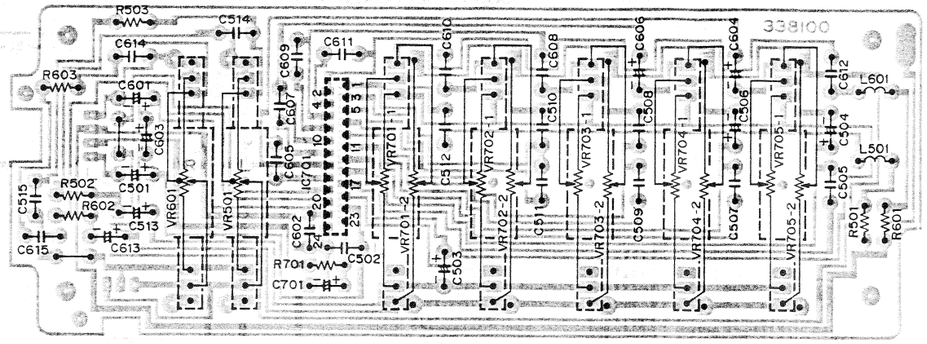
NOTE:
There are two types of MW255L.
One type of MW255L includes the EXT ANT jack and DX/LOCAL switch on the back side of the unit, and another type of MW255L excludes the EXT ANT jack and DX/LOCAL switch on the back side of the unit. Be careful to each Wiring Diagram.

WIRING DIAGRAM (Continued)

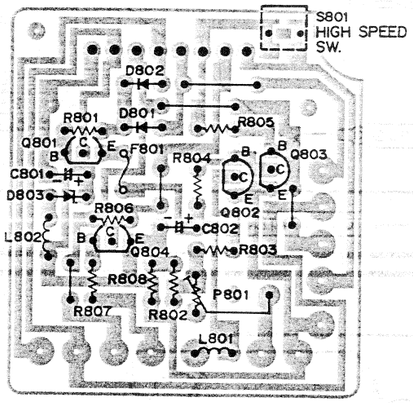
– The model of EXT ANT jack excluded –



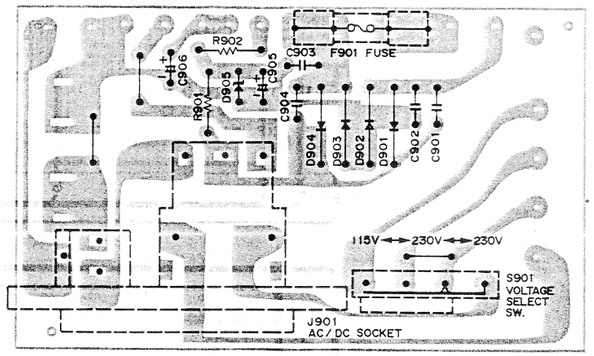
GRAPHIC EQUALIZER P.C.BOARD
(BOTTOM VIEW)



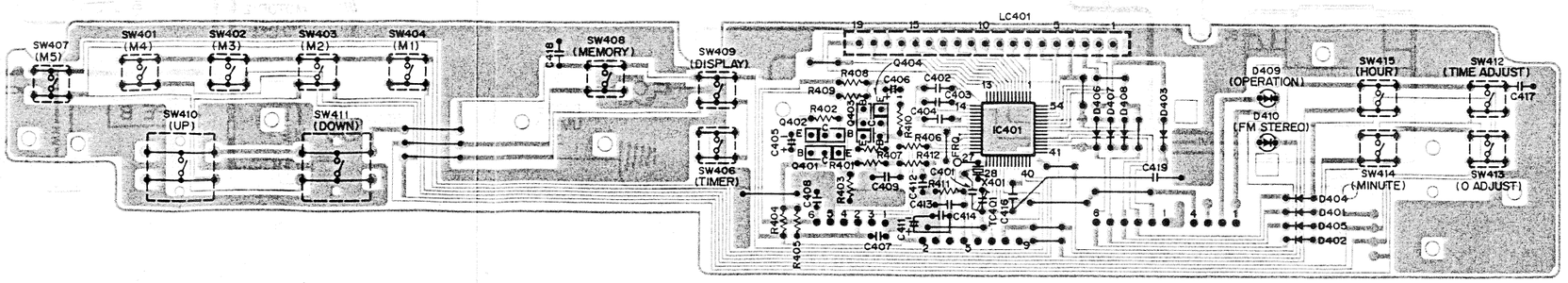
CONTROL P.C.BOARD
(BOTTOM VIEW)



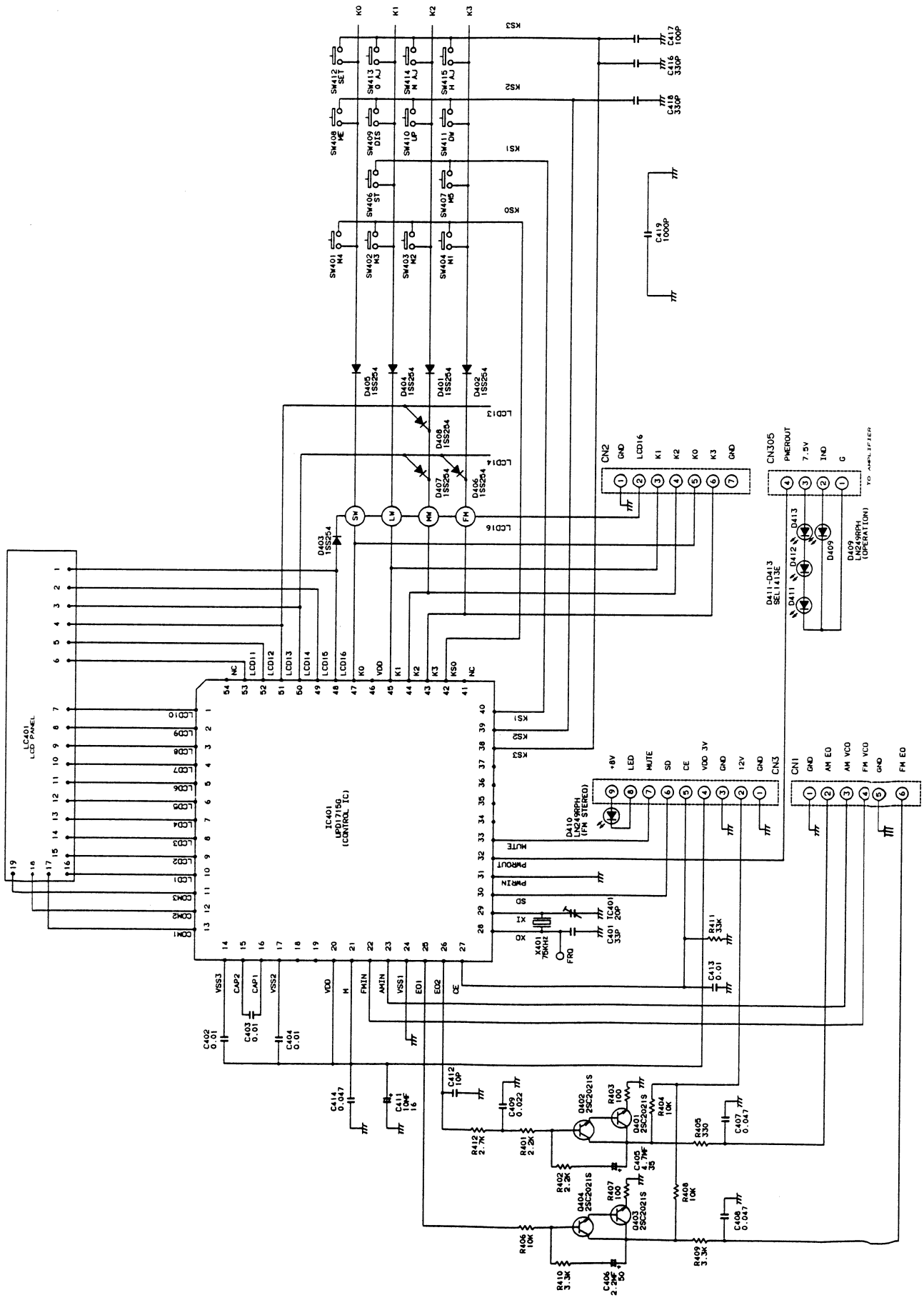
POWER P.C.BOARD
(BOTTOM VIEW)



CONTROL TUNER P.C.BOARD
(BOTTOM VIEW)

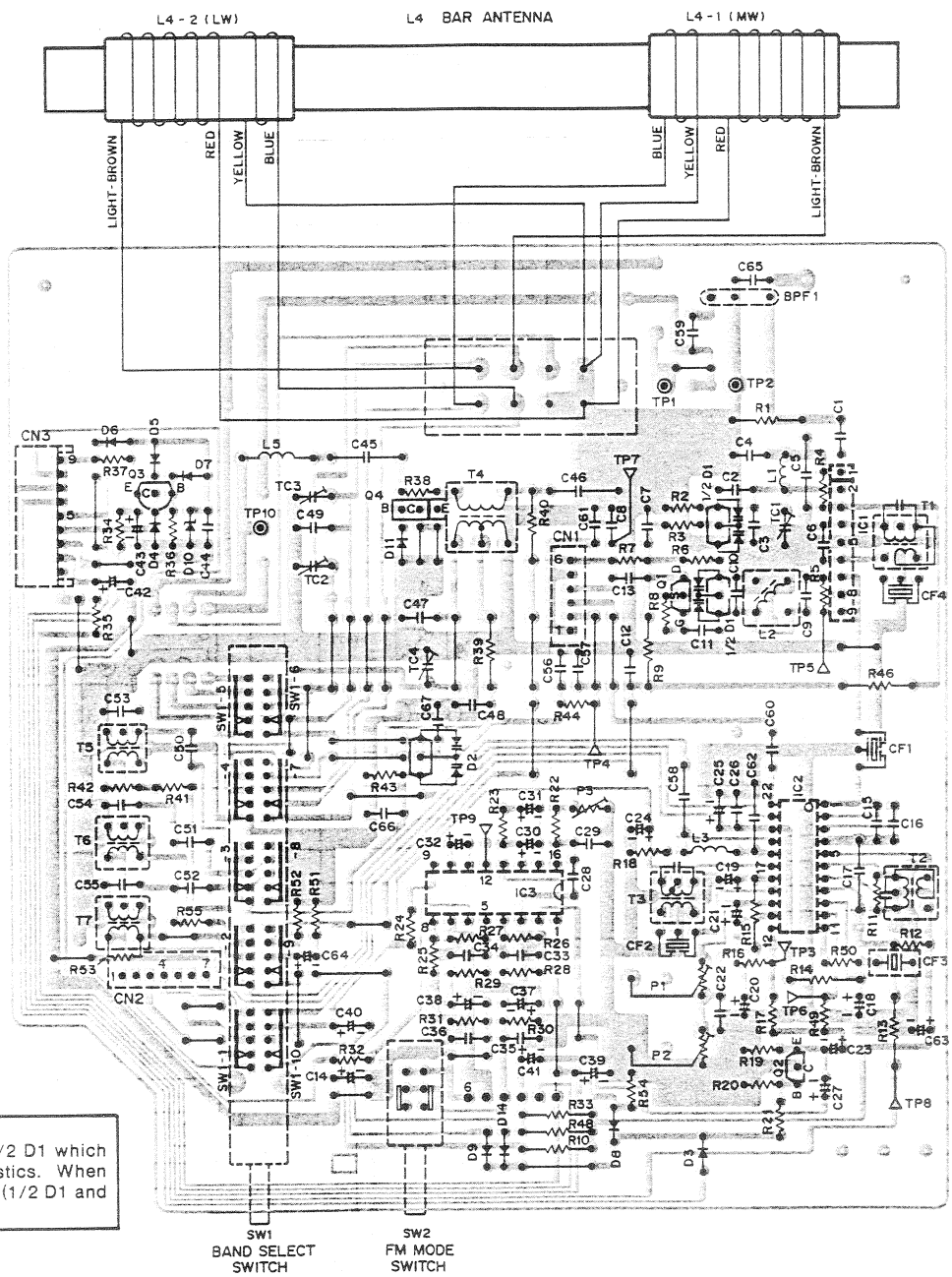


SCHEMATIC DIAGRAM (Control Tuner)



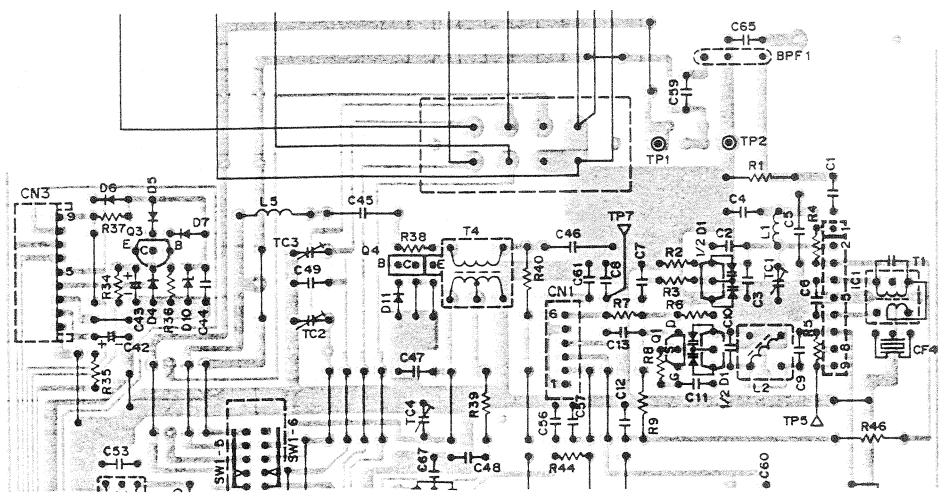
RADIO TUNER P.C.BOARD
(BOTTOM VIEW)

– The model of
EXT ANT jack supplied –



NOTE:
The **D1** consists of 1/2 D1 and 1/2 D1 which have the equivalent characteristics. When replacing, obtain a new pair of D1 (1/2 D1 and 1/2 D1) together.

– The model of
EXT ANT jack excluded –



SCHEMATIC DIAGRAM (Radio Tuner)

– The model of EXT ANT jack supplied –

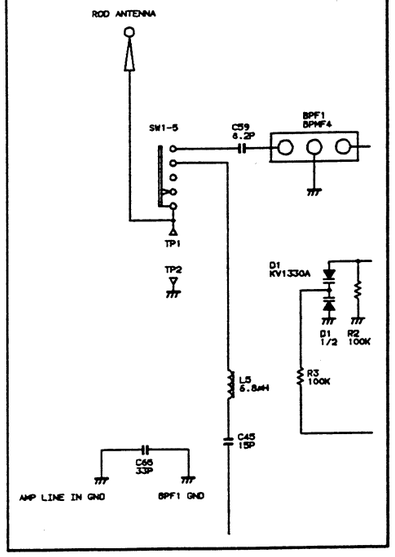
NOTE:
The **D1** consists of 1/2 D1 and 1/2 D1 which have the equivalent characteristics. When replacing, obtain a new pair of D1 (1/2 D1 and 1/2 D1) together.

IC1 BA4412		
	AM(V)	FM(V)
1	0	1.0
2	0	4.1
3	0	4.1
4	0	4.1
5	0	0
6	0	4.1
7	0	3.3
8	0	4.0
9	—	—

IC2 LA1265					
	AM(V)	FM(V)		AM(V)	FM(V)
1	1.1	2.3	12	1.7	1.6
2	1.1	2.3	13	0.9	0.4
3	1.1	2.3	14	0	0.4
4	0	0	15	1.1	2.3
5	6.6	6.3	16	1.6	1.5
6	6.6	6.3	17	6.5	0.1
7	6.6	6.3	18	2.0	0.1
8	4.2	3.7	19	2.0	0.1
9	3.6	4.1	20	3.7	3.9
10	2.6	2.5	21	3.7	2.8
11	1.1	1.1	22	1.6	2.1

IC3 BA1335					
	AM(V)	FM(V)		AM(V)	FM(V)
1	6.6	6.3	9	2.1	0.1
2	1.6	1.6	10	1.1	1.1
3	1.2	1.4	11	1.1	1.1
4	2.3	2.3	12	0.1	0.9
5	2.3	2.3	13	1.1	1.1
6	5.1	4.8	14	1.1	1.1
7	0	0	15	1.1	1.1
8	0.2	0.2	16	2.3	1.7

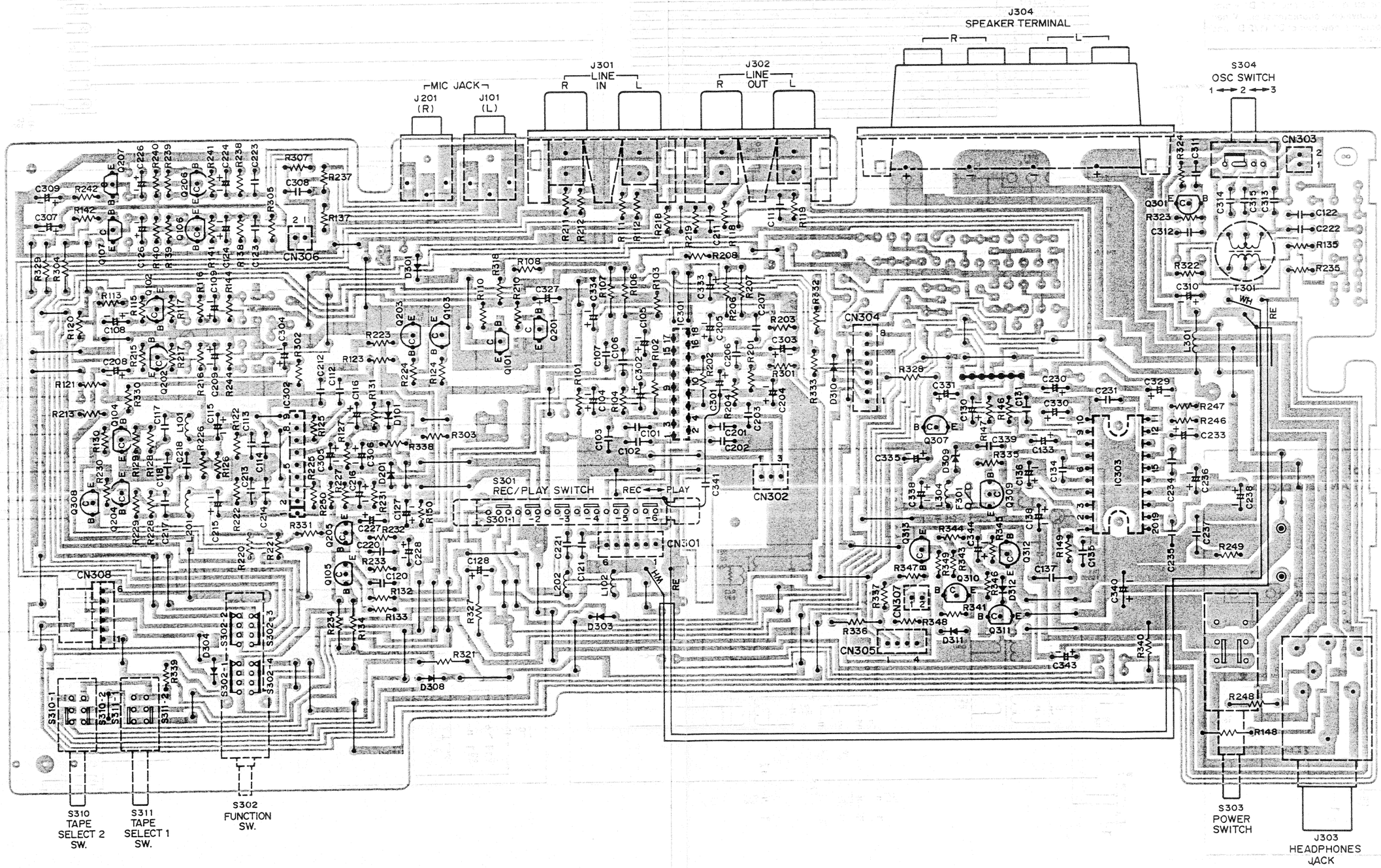
– The model of EXT ANT jack excluded –



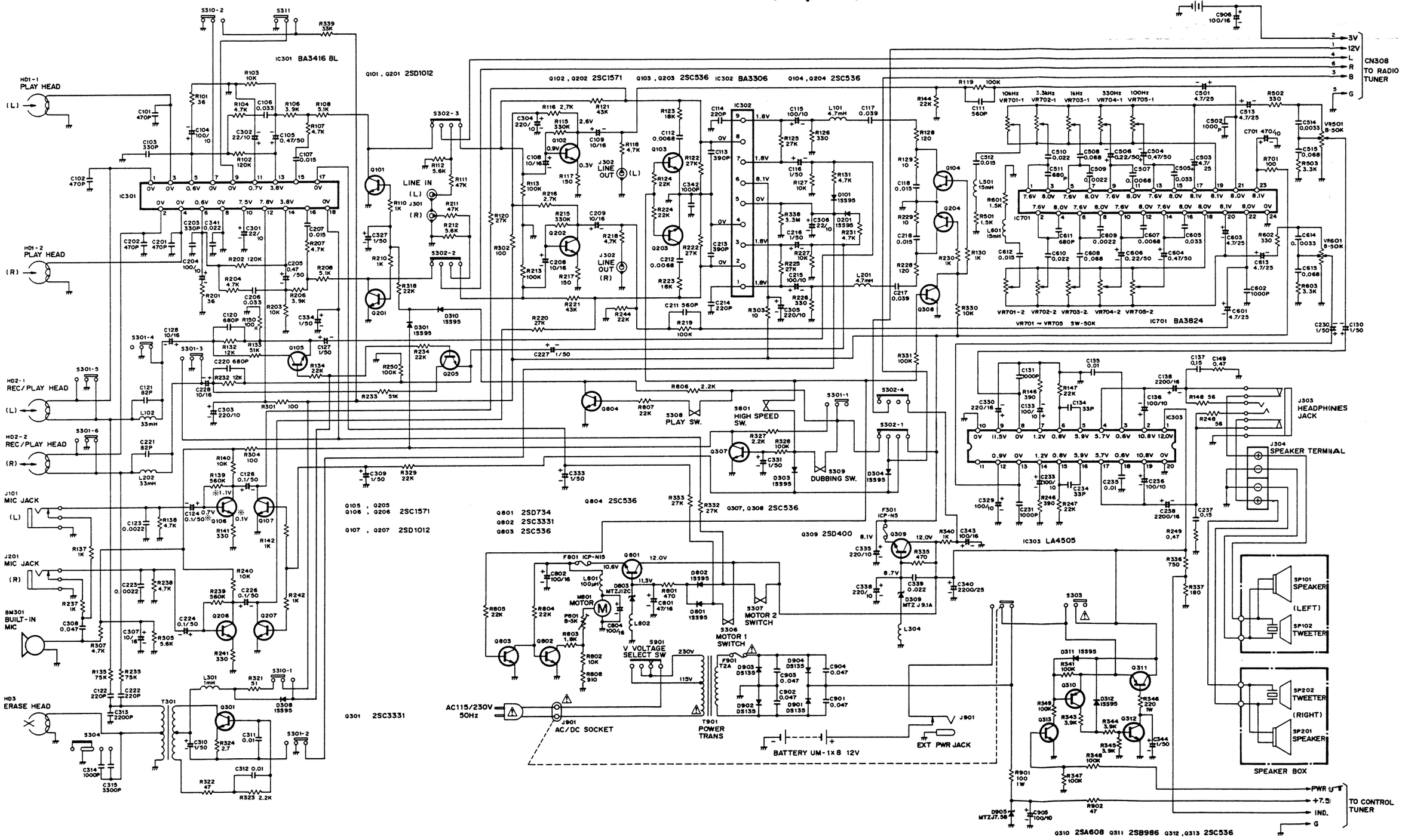
NOTE:
There are two types of MW255L.
One type of MW255L includes the EXT ANT jack and DX/LOCAL switch on the back side of the unit, and another type of MW255L excludes the EXT ANT jack and DX/LOCAL switch on the back side of the unit. Be careful to each Schematic Diagram.

No.	Name	Position
SW1	Band Select Switch	LW
SW2	FM Mode Switch	STEREO
SW3	DX/LOCAL Switch	DX

AMPLIFIER P.C.BOARD
(BOTTOM VIEW)



SCHEMATIC DIAGRAM (Amplifier)



No.	Name	Position	No.	Name	Position
S301	Record/Play Switch	PLAY	S308	Play Switch	OFF
S302	Function Switch	TAPE	S309	Dubbing Switch	OFF
S303	Power Switch	OFF	S310	Tape Select 2 Switch	NORMAL
S304	OSC Switch	1	S311	Tape Select 1 Switch	NORMAL
S306	Motor 1 Switch	OFF	S801	High Speed Switch	OFF
S307	Motor 2 Switch	OFF	S901	Voltage Select Switch	230V

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTES:

1. All resistors values are indicated in "ohm" (K=10^3, M=10^6).
2. All capacitors values are indicated in "μF" (P=10^{-12}).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10 % with respect to chassis ground.
   c. No signals at input terminals.
   d. AC input at 230 volts 50 Hz.
4. This is a basic schematic diagram.

Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

SPEAKER BOX PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	SPEAKER BOX		
1	4-1519-72431	Speaker 120mm (2.4Ω) [SP101 & SP201]	2
2	131-2-3205-12700	Wood Reinf	2
3	141-0-1129-32500	Speaker Box Top Assy	2
	Following the speakers are included in Speaker Box Top.		
	4-1519-71211	Speaker (300Ω) [SP102 & SP202]	2
4	141-2-1129-58300	Speaker Box Bottom R	1
5	141-2-1129-59400	Speaker Box Bottom L	1
6	4-2439-73160	Parallel Wire	2
7	141-2-4219-14200	Screw	8
12	411 001 1703	SCR S-TPG PAN 3X30	8

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

SPEAKER BOX EXPLODED VIEW